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Traductions Übersetzungen Переводы

THE ARCHITECTURAL REVIEW SEPTEMBER 1949

Septembre 1949

Page 139: *Le Problème des Conifères*, par J. D. U. Ward. Depuis quelques années, la sylviculture scientifique et la plantation des conifères en Grande-Bretagne sont devenues des termes pour ainsi dire synonymes. Cette association devrait-elle se perpétuer? LA REVUE est persuadée qu'elle ne devrait pas l'être, et qu'il incombe aux architectes paysagistes d'insister pour que certaines considérations, autres qu'économiques, soient respectées. J. D. U. Ward explique dans cet article les arguments soutenus par les experts sylviculteurs en faveur des conifères, tandis que LA REVUE donne en marge un commentaire sur les arguments en question.

Page 144. *La Question du Logement à Hackney*, par Frederick Gibberd, Architecte. En général, les agglomérations urbaines en Grande-Bretagne revêtent l'une ou l'autre des deux formes suivantes: soit de petites maisons à deux étages avec jardins privés, au périmètre de la ville, soit de blocs d'immeubles sans jardins, dans la zone centrale. Le projet de Frederick Gibberd pour Hackney représente une exception à cette règle. Basé toujours sur le principe de l'agglomération bien définie, ce plan vise à faire valoir les avantages possibles résultant du mélange étroit des différents genres d'habitations, dans le but de créer un ensemble combinant la structure urbaine avec une grande variété d'effets visuels.

Page 153. *Vers une Architecture Nouvelle: Les Ecoles*, par Robert Townsend. Trois catégories de constructions furent exemptées de la prohibition sur l'emploi des capitaux imposée en Grande-Bretagne l'année dernière, à savoir les maisons, les fabriques et les écoles. Parmi celles-ci, les écoles revêtent actuellement une importance spéciale en vue des exigences du nouveau Décret sur l'Instruction. En conséquence, elles font l'objet du deuxième article de notre série traitant des progrès de la construction d'après-guerre en Angleterre, étude qui est suivie de seize pages illustrant quatre édifices importants récemment achevés, dans le cadre du programme scolaire prévu par le Conseil Départemental du Hertfordshire. (Le premier article de cette série, au sujet des maisonnettes, fut publié en Octobre 1948, et le troisième, qui paraîtra plus tard cette année, traitera des appartements.)

Page 177. *Réévaluation No. 5: Stonehenge*, par John Piper. Stonehenge, le grand cercle mégalithique situé sur les hauteurs du Wiltshire, est le plus com-

menté de tous les monuments britanniques, et de ce fait a le plus besoin d'être réévalué selon les principes établis pour notre présente série d'articles. Ce monument est examiné par John Piper non seulement d'un œil de peintre, mais aussi avec une mentalité s'harmonisant avec celle des anciens archéologues, dont les théories au sujet de Stonehenge—si fantastiques qu'elles soient—laissent entrevoir une compréhension plus profonde de la beauté et du mystère de ce monument que ne le fait l'attitude négative des archéologues du vingtième siècle. Toute ère, ainsi que le démontrent les peintures et les gravures, a conçu Stonehenge à sa propre façon: 'la conception humaine de cette œuvre a tellement changé qu'il est permis de dire qu'elle-même a changé.' Ce qu'il y a lieu d'affirmer de nos jours, c'est que 'Stonehenge est un des plus beaux monuments de Grande-Bretagne qui n'aient jamais été construits par la main de l'homme.' (Les photographies sont aussi de John Piper.)

Page 183. *'L'Orcades'* est le dernier paquebot de la Orient Line mis en service. Le décor intérieur exécuté sous la direction de Brian O'Rourke, comprend des peintures murales par des artistes contemporains, et les illustrations publiées les montrent dans leur propre milieu.

Page 186. *Kentissime*, par W. Lindus Forge. William Kent (1684-1748) tout en étant partisan avoué de Palladio, fut un des premiers architectes anglais à s'élancer dans le style pseudo-médiéval—fait de plus grande portée que beaucoup d'historiens d'architecture sont disposés à l'admettre. Cet article discute, à l'aide d'illustrations, une de ses premières constructions soi-disant 'gothiques,' qui fut érigée autour d'une loge de garde du quinzième siècle.

Page 188: *Le Fer Primitif (No. 2): Les Serres Curvilignes*, par Nikolaus Pevsner. Dans ce deuxième numéro d'une série de courts articles sur les usages anciens du fer dans la construction, Nikolaus Pevsner démontre que la tradition de la Serre de Chatsworth, de Paxton, et du 'Crystal Palace' est bien d'origine anglaise et non pas (comme le livre du Dr. Giedion 'L'Espace, le Temps et l'Architecture' le laisse sous-entendre) d'origine française. Les illustrations sont prises du livre de J. C. Loudon 'Croquis de Serres Curvilignes,' qui fut publié en 1818.

Page 189: *La Plante d'Intérieur*, au Danemark, par E. Langkilde. La plante cultivée comme décoration intérieure gagne en popularité dans le monde entier. C'est cependant au Danemark que

ses possibilités ont été le plus exploitées (circonstance attribuable en grande partie aux conditions climatiques). Dans cet article, un architecte danois écrit au sujet des méthodes employées dans son pays, principes qui pourraient facilement être adaptés à d'autres régions.

September 1949

Seite 139: *Das Nadelbaum-Dilemma von J. D. U. Ward*. Forstkultur auf wissenschaftlicher Grundlage und Anpflanzungen von Nadelbäumen waren in den letzten Jahren in Grossbritannien identisch. Soll diese Gleichsetzung auf die Dauer bestehen? Die ARCHITECTURAL REVIEW ist vom Gegenteil überzeugt—es ist die Aufgabe des Landschaft-Planers darauf zu dringen, dass man von anderen als nur wirtschaftlichen Erwägungen auszugehen habe. J. D. U. Ward, ein Fachmann in Forstkultur, tritt für Anpflanzungen von Nadelbäumen ein, während die ARCHITECTURAL REVIEW ihren Standpunkt in Randbemerkungen vertritt.

Seite 144: *Eine Siedlung in Hackney von Frederick Gibberd, Architekt*. Wohnhäuser werden in England im allgemeinen nach zwei Prinzipien gebaut: entweder als kleine, zweistöckige Häuser mit Gärten an der Peripherie der Stadt oder als Etagenblocks ohne Gärten innerhalb des Weichbildes der Stadt. Gibberds Plan für Hackney bildet eine Ausnahme von dieser Regel. Er geht von der Anlage von Vorortshäusern aus, und benützt die Möglichkeiten, die in einer Mischung der verschiedenen Wohntypen bestehen. Auf diese Weise schafft er ein Gesamtbild, das Stadt und Landschaft zu einem Ganzen wirkungsvoll zusammenschliesst.

Seite 153: *Architektur auf neuen Wegen: Schulen von Robert Townsend*. Drei Kategorien von Gebäuden unterliegen nicht den amtlichen Sparrmassnahmen, die vor einem Jahr in England erlassen wurden: Wohnhäuser, Fabriken und Schulen. Unter ihnen sind Schulen z. Zt. von besonderer Bedeutung mit Rücksicht auf die Forderungen der neuen Erziehungsgesetze. Sie sind daher der Gegenstand der zweiten Studie der ARCHITECTURAL REVIEW über

Nachkriegsbauten in England. Abbildungen auf 16 Seiten veranschaulichen vier bemerkenswerte Gebäude, die kürzlich als Teil des Schulprogrammes in Hertfordshire fertiggestellt worden sind. Der erste Aufsatz in dieser Serie über kleine Wohnhäuser erschien im Oktober 1948, der dritte über Etagenhäuser wird im Laufe dieses Jahres erscheinen.

Seite 177: *Neuwertungen No. 5. Stonehenge* von John Piper. Stonehenge, der grosse megalithische Steinkreis in Wiltshire, hat von allen Denkmälern in Grossbritannien am meisten unter abgedroschenen Phrasen gelitten und bedarf daher mehr als alle anderen einer Neuwürdigung nach den Grundsätzen, die für diese Artikelserie gelten. John Piper geht an diese Aufgabe mit dem Auge des Malers heran, aber er hat auch Sinn für die Anschauungen der früheren Altertumsforscher, deren Theorien über Stonehenge, bei all ihrer Phantastik, ein viel tieferes Verständnis für die Schönheit und das Geheimnis von Stonehenge verraten, als die unfruchtbaren Negierungen der Archäologen des 20. Jahrhunderts. Jede Generation, wie Bilder und Radierungen beweisen, hat Stonehenge in neuer und besonderer Art gesehen. Die Art und Weise ist so verschieden, dass man sagen könnte, das Denkmal habe sich geändert. Worauf es heute ankommt, ist zu beweisen, dass Stonehenge eines der grossartigsten von Menschen geschaffenen Denkmäler in England ist. (Die Aufnahmen sind gleichfalls von John Piper.)

Seite 183. *Der Dampfer 'Orcades'* ist das jüngste Orient-Linienschiff. Die Innenausstattung unter Leitung von Brian O'Rorke, hat Wandbilder von zeitgenössischen Künstlern, die hier in dem Rahmen, für den sie geschaffen wurden, gezeigt werden.

Seite 186: *Kentissime* von W. Lindus Forge. William Kent (1684-1748) stand ohne Frage unter Palladios Einfluss; das hat ihn aber nicht gehindert, einer der ersten englischen Architekten zu sein, der dem pseudo-mittelalterlichen Stil seinen Tribut entrichtet hat, ein Umstand von viel grösserer Bedeutung als Kunsthistoriker zuzugeben bereit sind. Im vorliegenden Aufsatz wird an Hand von Abbildungen eines seiner frühesten sogenannten gotischen Gebäude untersucht, dessen Kern ein im Stil des 15. Jahrhunderts gebautes Torhaus ist.

Seite 188: *Frühe Eisenkonstruktionen No. 2 Gewölbte Treibhäuser von Nikolaus Pevsner*. In dieser zweiten Notiz über den Gebrauch von Eisen in Bauwerken zeigt Pevsner, dass die Verwendung von Eisen in Paxtons Gewächshaus in Chatsworth und im Kristallpalast auf englische und nicht auf französische Vorbilder zurückgeht, wie Dr. Giedion in 'Raum, Zeit und Architektur' angenommen hatte. Die Abbildungen sind J. C. Loudon's 'Sketches of Curvilinear Hothouses' (1818 erschienen) entnommen.

Seite 189: *Pflanzen als Innendekoration in Dänemark von E. Langkilde*. Pflanzen werden neuerdings in starkem Masse für Innendekoration verwendet. Diese Möglichkeit ist nirgends so ausgebeutet worden wie in Dänemark, was im wesentlichen auf klimatische Gründe zurückzuführen ist. Ein dänischer Architekt schreibt hier über die Grundsätze, die in seinem Lande in dieser Hinsicht massgebend sind und die auch von anderen Ländern übernommen werden könnten.

Сентябрь 1949 г.

КРАТКОЕ СОДЕРЖАНИЕ СТАТЕЙ:

Стр. 139. **ДЖ. Д. Ю. ВОРД. ДИЛЕММА ХВОЙНЫХ ДРЕВОНАСАЖДЕНИЙ**

В последние годы в Великобритании научное лесоводство и насаждение хвойных деревьев в сущности стали различными именами для той же самой вещи. Следует ли это продолжать? По определенному убеждению Редакции этого быть не должно: долг художественных садоводов настаивать на том, чтобы обращалось побольше внимания не на одну только экономическую сторону дела. В этой статье ДЖ. Д. Ю. ВОРД защищает схему хвойных древонасаждений, рассматривая задачу с точки зрения эксперта-лесовода, в то время как РЕДАКЦИЯ комментирует его аргументацию.

Стр. 144. **АРХИТЕКТОР ФРИДЕРИК ГИББЕРД. ДОМОСТРОИТЕЛЬСТВО В ХАКНЕЙ** (одно из восточных предместий Лондона)

Вообще говоря, комбинаты домов в Великобритании имеют одну из двух форм: либо они состоят из небольших двухэтажных домиков с отдельными садами (главным образом на периферии городов и в городских предместиях), или же они представляют собою доходные многоквартирные дома без садов (большею частью в центральных районах городов). Схема автора для Хакней является исключением из этого правила. Его план основан на принципе, обычно применявшемся к строительству домов на церковных владениях (так называемом "пресинктуальном" принципе). Он использует возможность, заключающуюся в широком комбинировании различных типов жилищ для того, чтобы создать окружение, совмещающее городской масштаб с разнообразием зрительных эффектов.

Стр. 153. **РОБЕРТ ТАУНСЭНД. ПО ПУТИ К АРХИТЕКТУРЕ: ШКОЛЫ.**

Когда год тому назад (в результате недостатка иностранной валюты и иных послевоенных трудностей) было введено в Великобритании строгое ограничение капиталовложений, три категории были изъяты из этих ограничений: жилые дома, заводы и школы. Из этих трех категорий, школы преобладают в настоящее время особую важность, имея в виду требования нового законодательства по народному образованию. Поэтому школьное строительство является предметом второго из серии печатаемых в нашем журнале очерков, посвященных послевоенным достижениям Великобритании. В настоящей статье дается описание четырех, недавно законченных, выдающихся сооружений, представляющих часть программы школьного строительства Совета Хартфордширского Графства (первый очерк из этой серии, посвященный частным домам был напечатан в Октябрьском номере 1948 г.); третий очерк, посвященный многоквартирным домам, будет напечатан позднее в этом году.

Стр. 177. **ДЖОН ПАЙПЕР. ПЕРЕОЦЕНКА 5. СТОУНХЕНДЖ**

Стоунхендж известен своими знаменитыми развалинами храма древних друидов (солнцеклонников), состоящих из огромных камней, расставленных в круг. Стоунхендж лежит среди живописных холмов Вилчирского Графства. Он является

одним из наиболее затрепанных британских памятников старины, а потому он, естественно, нуждается в переоценке (следуя принципу, установленному в настоящей серии статей). Автор глядит на развалины и их окружение глазами художника, высказывая в то же время сочувственное понимание точки зрения знатоков древностей старой школы, теории которых, насчет происхождения Стоунхенджа, может быть и фантастические, внушают гораздо более глубокое ощущение красоты и таинственности, чем бесплодная отрицательность археологов двадцатого столетия. Картины и гравюры прошлого показывают, что каждый век глядел на Стоунхендж по своему: представление о Стоунхендже настолько изменилось, что мы имеем право сказать, что сам Стоунхендж изменился. Всего важнее в настоящий момент то, что Стоунхендж является одним из наиболее прекрасных человеческими руками сотворенных предметов в Великобритании. (Статья иллюстрирована воспроизведениями фотографий самого автора).

Стр. 183. **ОПИСАНИЕ ОКЕАНСКОГО ПАССАЖИРСКОГО ПАРАХОДА „ОРЕКЕЙДС“**

Пароход этот является последним из заново отремонтированных после войны судов Восточной линии. Внутренняя отделка произведена под руководством Брайана О'Рорке. Она включает стенную живопись современных художников, показанную на иллюстрациях вместе с окружающей обстановкой.

Стр. 186. **В. ЛИНДУС ФОРДЖ. „КЕНТИССИМЕ“**

Вильям Кент (1684-1748) не только был сторонником монументального ("палладиального") стиля, но он является также первым английским архитектором, проектировавшим в псевдо-средневековом стиле. Последнее обстоятельство имеет гораздо большую значительность, чем это обычно признается историками архитектуры. В настоящей статье обсуждается и иллюстрируется одно из его ранних, так называемых, "Готических" зданий, которое было построено вокруг заставы пятнадцатого столетия, послужившей ядром всего сооружения.

Стр. 188. **НИКОЛАЙ ПЕВЗНЕР. РАННЕЕ ЖЕЛЕЗО (2). КРИВОЛИНЕЙНЫЕ ОРАНЖЕРИИ**

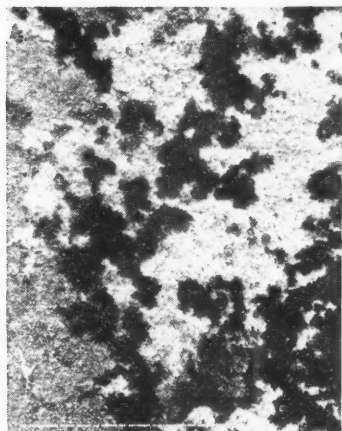
Эта статья является второй из серии заметок, посвященных ранним стадиям применения железа в постройках. Автор показывает, что предтечами Пакстоновской оранжереи в Чатсворте и Хрустального Дворца в Лондоне являются английские работы, а не французские (как можно было бы заключить из статьи д-ра Гиддона "Время Пространство и Архитектура"). Иллюстрации взяты из книги Дж. С. Лаудона "Эскизы криволинейных оранжерей", опубликованной в 1818 г.

Стр. 189. **Е. ЛЭНГКИЛД. КОМНАТНЫЕ РАСТЕНИЯ В ДАНИИ**

Растения в качестве внутреннего украшения преобладают все большую и большую популярность по всему свету. Однако возможности этой формы внутренней декорации были исследованы с наибольшей полнотой в Дании (в значительной степени благодаря климатическим условиям). Автор настоящей статьи, датский архитектор, излагает принципы, которым декораторы следовали в его стране, и которые могут прекрасно быть применены и в других странах.

THE ARCHITECTURAL REVIEW

Volume 106 Number 633 September 1949



The Cover is a photograph by John Piper of the weather-worn, lichenous surface of a Stonehenge megalith. On pages 177-182 John Piper contributes a reassessment of Stonehenge, affirming its qualities as 'a giant of visual drama and intensity.'

133 Mural in R.M.S. Orcades

139 The Dilemma of the Conifers by J. D. U. Ward In Britain of recent years, scientific forestry and the planting of conifers have to all intents and purposes become two names for the same thing. Should the equation be perpetuated? The REVIEW is certain that it should not—that it is the landscape-planner's duty to insist on attention being paid to things other than economic considerations. J. D. U. Ward states the forestry expert's case for conifers, while the REVIEW makes marginal comments on his arguments.

144 Housing at Hackney Architect: Frederick Gibberd Housing estates in Britain generally take one of two forms—small two-storey houses with private gardens on the perimeter of towns, or blocks of flats without gardens in central areas. This scheme at Hackney is an exception. Based on the precinctual principle, it exploits the thorough mixing of different types of dwelling, producing an environment which combines an urban scale and a wide range of visual effects.

153 Towards an Architecture: Schools by Robert Townsend Three categories of building were exempted from the ban on capital expenditure imposed a year ago—houses, factories and schools. Of these, schools have a special importance in view of the new Education Act. They are, therefore, made the subject of the second of the REVIEW's studies of post-war building achievement in Britain, which is followed by pages illustrating four outstanding buildings recently completed by the Hertfordshire County Council.

Four Schools in Hertfordshire

161 School at Essendon

163 School at Hitchin

165 School at Cheshunt

Architects: Hertfordshire County Council Architect's Department.*

169 School at Stevenage Architects: F. R. S. Yorke, E. Rosenberg, C. S. Mardall

177 Reassessment 5. Stonehenge by John Piper Stonehenge is the most hackneyed of British monuments—and thus the one most in need of reassessment on the principles laid down for this series. Here John Piper looks at it with a painter's eye, but also with a sympathetic understanding of the old antiquaries, whose fantastic theories suggest a much deeper feeling for the beauty and mystery of it than do the sterile negatives of twentieth century archaeologists. Every age has seen Stonehenge in its own way: 'man's vision of it has changed so much that one is at liberty to say it has changed.' What needs saying to-day is that 'Stonehenge is one of the most beautiful man-made objects in Britain.'

183 R.M.S. Orcades is the latest Orient liner to be put into service. The decoration of the interior, carried out under the direction of Brian O'Rourke, includes murals by contemporary artists, which are here shown in their setting.

186 Kentissime by J. W. Lindus Forge William Kent was one of the first English architects to design in a pseudo-medieval style—a fact of greater significance than historians of architecture are often willing to allow. This article discusses and illustrates one of his earliest 'Gothic' buildings.

188 Early Iron 2. Curvilinear Hothouses by Nikolaus Pevsner In this second of a series of notes on the early use of iron in building, Nikolaus Pevsner shows that the ancestry of Paxton's Chatsworth Conservatory and Crystal Palace was English, and not (as implied by Dr. Giedion in *Space, Time and Architecture*) French. The illustrations are from J. C. Loudon's *Sketches of Curvilinear Hothouses*, 1818.

189 Indoor Plants in Denmark by E. Langkilde The growing plant as indoor decoration gains in popularity all over the

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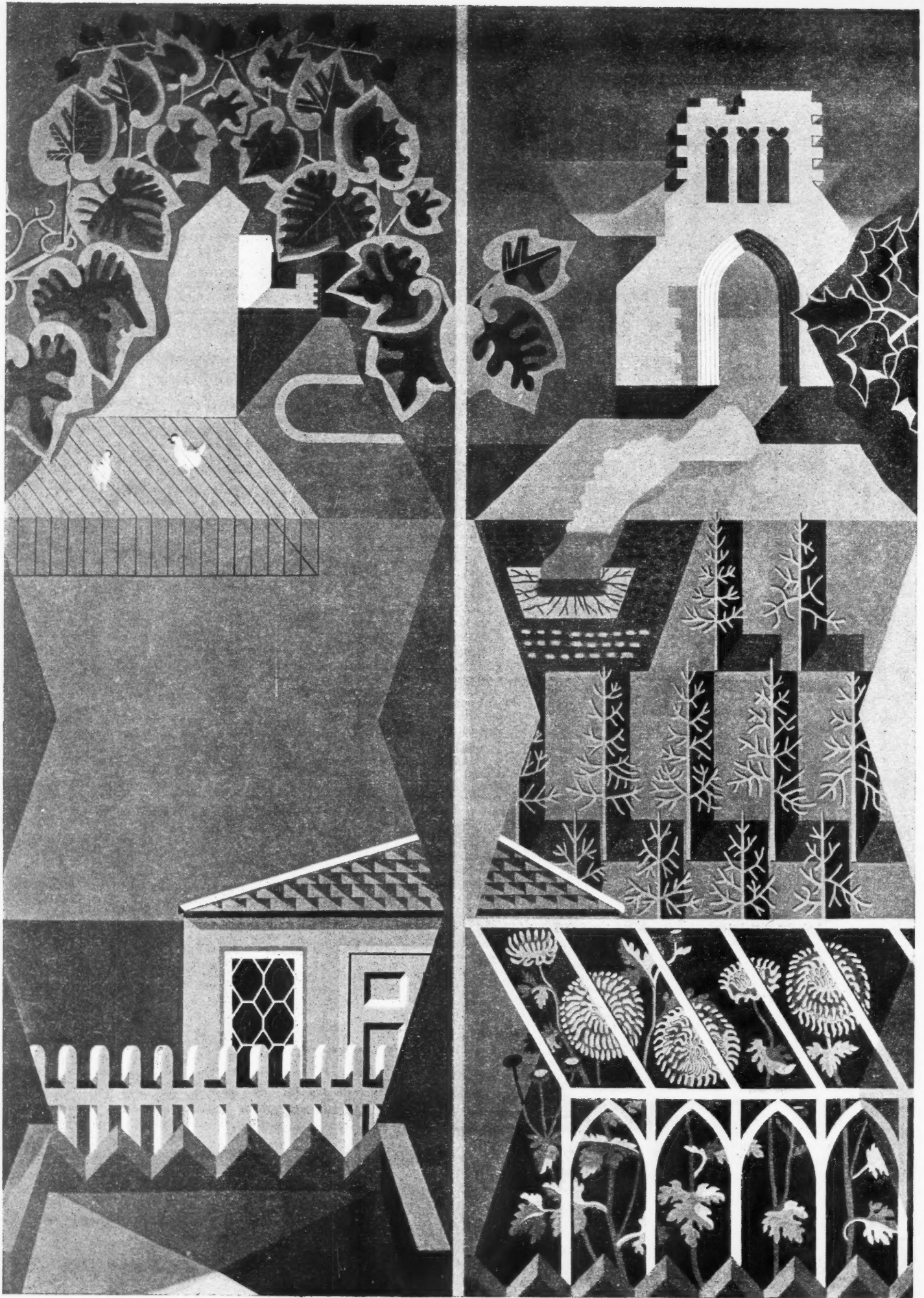
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THREE SHILLINGS AND SIXPENCE



The decoration of an ocean-going liner affords an opportunity for good design that is taken only too rarely. One exception is R.M.S. ORCADES, a recently launched Orient ship, with an interior designed by Brian O'Rourke. Above is a detail from Edward Barden's mural Essex in Autumn, which is the central feature in the 1st Class lounge. It is illustrated in colour along with other murals from the ship on pages 183-5.

THE DILEMMA OF THE CONIFERS

One of the biggest questions facing the British landscape-planner today is simply this: Should Britain be covered with conifers? THE ARCHITECTURAL REVIEW'S unhesitating reply to that question is 'No;' it believes that the landscapist's business is to preserve and develop those characteristics which differentiate one landscape from another, and that in the present case that means fighting tooth and nail against the turning of 'suitable' parts of our island into poor copies of Scandinavia or the Black Forest. The forestry expert's reply is 'yes and no,' but with so many qualifications of the 'no' that the effect is that of an unequivocal 'yes.' In the following article the professional forester's case is stated by J. D. U. Ward, while the REVIEW comments on his arguments in the margin. The upshot of what Mr. Ward has to say is that visual planners are sentimentalists who do not know enough about the hard facts of scientific forestry; the REVIEW on the other hand points out that forestry experts persist in ignoring a whole philosophy of planning whose foundations were laid by the eighteenth-century landscapists, and that even the rare exceptions like Mr. Ward are unwilling to recognize the present-day implications of that philosophy.

THERE ARE GOOD reasons why more conifers should be planted in Britain. First, most of the land available for forests is of poor quality, suitable for the production of softwoods rather than hardwoods. Also, softwoods can be grown more quickly: if a length of timber for a required purpose can be produced in fifty years by larch or pine, it is not economical to use oak, which may need one hundred years to make the same timber. Second, in a free market, before the war, the country's timber consumption was divided between 94 per cent softwoods and 6 per cent hardwoods. Third, there are or have been strategic considerations: reserves of mining and other essential softwood timbers have hitherto been judged most important.

This emphasis on conifers carries implications distasteful to people who admire the typical landscapes of Midland and Southern England, where the dominant trees are broad-leaved species; and the subject is here considered with special reference to this more civilized and densely populated half of the country.

The first point mentioned above must be accepted in general; but, so far as Midland and Southern England in particular are concerned, it may be disputed. There are certain areas (Thetford Chase, Rendlesham Forest and Wareham Forest provide examples) where conifers must be the main crop, but

most of England's southern half is covered by 'brown earth' or hardwood soils, the climate is very temperate, and the whole territory lies within what ecologists term the broad-leaved forest zone. (Even in such a place as Thetford Chase some broad-leaved or hardwood trees will thrive, and post-war surveys have shown that the beech in beech/conifer mixtures is doing better than was suspected.) In the southern half of England there are few forests at elevations exceeding six hundred feet and few (if any) areas available for growing spruce on a scale large enough for pulping operations. Much of the territory is so far from mines that trees could not be grown economically for the prime purpose of making pitprops.

The second argument for conifers also requires some qualification, because of the rapid growth of the plywood industry. This should lead in future years to an increased demand not only for beech but also for birch and sycamore—timbers hitherto regarded as of slight value. Further, birch will flourish on soils too poor for most other hardwoods, and it is relatively immune from attack by rabbits.

The third argument is perhaps the weakest or most speculative today, since atom bombs have much reduced the chances of any future wars lasting so long that standing timber reserves would have any strategic import-

ance. It is also possible that the development of atomic energy for peaceful purposes may change the whole of this country's power-complex, in so far as it is based on coal-mining. This development, if it occurs, may lie several years ahead, but it may aptly be considered now, since even the quickest-growing trees take twenty years to make a pitprop, and a typical pitprop plantation may be said to require forty to fifty years to mature. Who can forecast the development of atomic energy or the relative importance of coal mines twenty, forty or fifty years hence?

In all these circumstances, any large or sudden expansion of conifer or softwood plantations in what may be loosely called the hardwood half of the country seems to offer extremely dubious advantages in return for indubitable damage to a landscape that has been evolved over a long period of time.

* * *

The objections to any deliberate 'freezing' of a landscape, to the creation of a countryside where the woodlands are not developed, are obvious. Two quotations may suffice. First, from the Scott Report, where the words 'agriculture' and 'farm' may fairly be understood to comprehend forestry and the proper exploitation of woodlands.

Even were there no economic, social or strategic reasons for the maintenance of

comment by the editors

1 . . . England is changing all over every day, has changed a dozen times in history . . . This statement, useful as it once was to counteract the vulgar notion of a static landscape, is by constant and unqualified repetition, becoming as misleading as the idea it was coined to debunk. Trees come and go, but in the particular sense in which the phrase is meant there has been one major change, and one only, in the landscape since England became a nation, and that was the changeover from strip cultivation to enclosure; the rest is the story of the progressive conquest of the Wild. Since the Romans re-embarked for Europe there has been only one attempt, and that was an incomplete one, to create an aesthetic of landscape which would incorporate the visible life of the nation in a general pattern, and thus give embodiment to the whole social act—and that was the landscape-gardening movement of the eighteenth century, the aesthetic of enclosure. But this, though isolated, is also a unique phenomenon in that in no part of Western Civilization has the attempt ever been made before or since; it represents the greatest contribution England has made to European art, as well as one of the great contributions of all time to the social idea. According to its principles the economic exploitation of the land could be carried peaceably and as part of a humane philosophy. Spilling over into village and farm, its basic idea became the nucleus of the first democratic planning movement in history for it depended on the will of all parties involved to share a common visual idea. It even entered the city but was overcome by the industrial revolution and *laissez-faire* before it could establish its positions. The planning officer was the landlord himself. We who are casting feverishly around for a philosophy of planning that does not involve dictatorship might be forgiven if we made much of this remarkable experiment. But not only do we not make much of it; we ignore it

completely. So completely do we ignore it that the vast mass of our countrymen do not even know of its existence. Ignoring it we make no attempt to carry on its tradition or even understand its principles. One would think from the way most writers on forestry talk that it had never existed. Mr. Ward pays rather more than lip-service to it, but though he does not grudge it a place in history, and even a corner in a museum, he does not propose to apply its principles to the landscape of today, when, in fact, those principles are more applicable than ever. In our view they should be developed and completed. For, for all its triumphs, the landscape movement remained incomplete, awaiting in fact our own contribution in the shape of the incorporation of the urban landscape within the pattern. In such a picture the question of Christmas trees (foresters' slang for all conifers) is of course only one amongst many matters of detail, but it is an important one since the conifer has a peculiar capacity for changing the visual character of an environment; a peculiar genius also for producing out of diversity sameness, so that one conifer landscape in all major respects is uniform with another, be it Canada, Switzerland or Surrey.

2 'Because there is no grass on the floor' . . . seems to be no reason at all for condemning any kind of plantation. Whether the 'forest's ferny floor' is ferny is of no direct consequence in the landscape, any more than the decorations going on inside flat 13 matter to the civic designer. Let the inside of the forest be as clear or as dense as the forester determines, what matters to us here is the forest's profile, its part in the whole picture, not the undergrowth but the skyline. The cost is counted in terms of the jig jag jig jag as the conifer hits the sky, the shape of the plantation, the colour of the leaf in relation to its environment. Let us hasten to add that there are certain land-

agriculture, the cheapest way, indeed the only way, of preserving the countryside in anything like its traditional aspect would still be to farm it.

Second, from F. Kingdon Ward's *The Romance of Gardening*.

I never forget that the face of England is being re-made not in one feature only, but in every feature. England is changing all over, every day, as she has changed a dozen times in history. Preservation means self-preservation; otherwise it is that most hopeless of tasks—a negative activity. . . . So the Roads Beautifying Association and the Forestry Commission are doing more for the improvement of Britain than all the preservation societies in the country. It is futile to bewail the past; better to hail the future. . . . Each succeeding England is different, partly by reason of the ever-changing proportions of forest and swamp, grazing and cornland, which means ever the rise and fall of plant species. One may be sure the yeomen of England bewailed the dwindling of the Yew tree, just as Nelson's admirals deplored the increasing scarcity of the Oak.

But abstention from any large-scale planting of unmixed conifers in predominantly hardwood areas should involve neither 'freezing' nor the reduction of the woodlands to a moribund or museum status. There is ample room for progress, since most of the woodlands of the southern half of England are now in a deplorable condition from a forester's point of view (the yields of most private woodlands felled during the war were computed to be about one quarter what they would have been if they had been efficiently managed in the past), and the business of getting them into good shape, and effecting the various conversions indicated by modern developments and knowledge, should provide ample work for a generation or two.

Further, these changes will probably be as much as most people will digest aesthetically—and that remark needs some explanation. In the days when oak for naval architecture was the first requirement from England's forests, trees were allowed to grow on a 'natural' or 'semi-natural' principle: the oaks made no great height, and they branched low and spread much, so that twenty trees to an acre might be a maximum crop: the large crooks, bends and knees from oaks of this habit were of great value to ship-builders. When the navy ceased (after the battle of Hampton Roads in 1862) to demand oak for the larger warships, there was no general or serious attempt to adjust the silvicultural system, and in many places oak trees are to this day grown as standards over coppice, in much the same way as they were four hundred years ago. But wherever any kind of scientific or rational silviculture is introduced, standard oaks (if cultivated at all) are now encouraged to grow much taller and straighter and in far greater numbers. It will be recognized that an acre of modern forest carrying sixty tall mature oaks, averaging about one hundred and fifty cubic feet each, will look very different from an acre of ancient forest carrying fewer than sixteen mature oaks, averaging about fifty cubic feet each, and having beneath them hazel coppice or a mixed underwood, or thin grass. (And the difference will be as great at

intermediate stages: today a fifty-years-old oak plantation will normally consist of about seven hundred trees per acre, with top heights between fifty and sixty feet.) The change in appearance is not generally approved by people uninterested in forestry, but it may be permissible to quote the words of William Robinson, who was no mere philistine of a timber-growing forester.

In much of the southern counties the oak, our best native tree, is badly grown—thinly set in underwood, and as a roadside or single tree in pasture land or park. My own oaks often wasted their strength and their beauty growing all branches, tortuous and covering far too much of the wood. When cut down, they were not a third of the value of rightly grown oaks. . . . The right way of growing the oak we may see in the noble forests of France, like Marly or Bercy, with stems like monuments, and these with top branches too, though not half what our spreading oak bears. . . . For me the palm of beauty goes to the tree with fifty or more feet of clear stem.¹

There is a similar change, if to a less marked degree, in the management of other broad-leaved species. Birch affords a good example. Though birch is a soil-improver, it has been treated as a weed in most woodlands, and cut out because it is a swift-growing species liable to dominate its associates. Some foresters' anti-birch bias has been subconsciously aggravated by the misshapen trees commonly grown for amenity in front of new houses—'trees like crooked bits of putty covered with silver paper.' But birch treated seriously as a timber tree, grown straight and tall and with boles good enough to peel for plywood veneers, seems almost a different species and certainly offers a different kind of beauty.

The position might perhaps be summarized by suggesting that, in future, people must cease to expect a wild prettiness in woodlands managed for timber production, but should look instead for a rather austere and severely classical type of beauty. The emphasis will be almost entirely on vertical lines, and in mature high forests the effect of a lofty canopy supported by clean boles should be grandeur. These points are the more worthy of note because many of the popular protests against conifers have been excited (unknown to the protesters themselves) almost as much by changes of silvicultural practice as by changes of species. For examples, modern plantations are commonly criticized because there is no grass on the floor², or because there are few birds. In fact, where land is fully cropped with any timber other than poplar and possibly ash, there can be little or no grass on the floor, and the shade in even-aged plantations will be too deep for many of the birds which populate typical wild woodlands. Birds, con-

sidered generally, prefer glades and rides and the fringes of forests to dense plantations.

Again, certain weeds which may be aesthetically pleasing must be kept down if a forest is well managed. It would be as fair to ask a farmer to spare thistles, docks and charlock as to suggest that a forester should have honeysuckle, rose-briars and thorns in his plantations. At present, these elementary points are not generally appreciated: most people still look for the wrong kinds of beauty in forests, for their ideas of sylvan scenery are based on amenity or sporting woodlands of the older fashioned kinds—Burnham Beeches, Epping Forest, the oak plantations in Richmond Park, Oxshott Common, the unenclosed parts of the New Forest and the neglected coppice-withstandards of so many pheasant coverts. In short, many of those who condemn modern forestry for aesthetic reasons resemble country visitors who dislike St. Paul's Cathedral because it does not accord with a preconceived notion (based on Salisbury and Wells) of what a cathedral should be.

Other silvicultural changes which have occurred or are occurring include the gradual disappearance of oak coppice (previously grown for firewood and for tanbark, substitutes for which latter are now bought from abroad) and the decline in ash coppice, previously grown to provide rails for fencing and for other purposes now fulfilled either from rolls of barbed wire or from larch. And there is a widespread decline in the value of coppice and underwood generally,² because of an accumulation of many varied and apparently trivial influences, including such minor developments as the use of pine for broom handles, a decline in thatch (reducing the demand for thatchers' spars), the dying-off of the old hurdle-makers, and the use of canes as flower-stakes. If coppice and under-

² One striking exception must be noted. In some areas where there is a good demand for hop-poles or a business in making cleft-chestnut fencing, sweet chestnut coppice ranks among the most profitable of all woodland crops. If there were everywhere a demand for chestnut poles, the problem of what broad-leaved crop species can be considered economic would be less difficult. About twelve years ago an interesting illustration of local anti-hardwood conservatism was reported. A South Wales colliery was offered good local-grown sweet chestnut pit-props, but refused them: the management preferred to have the accustomed maritime pine props imported from Southern France and costing double the price of the chestnut. Comparable examples of international influences on English woodlands might be multiplied. When the Goodwood beeches were felled, the timber fetched less than 4d. a cubic foot because Britain could then buy cheap beech from abroad. Now, we are so short of beech that some manufacturers of women's shoe heels would gladly pay 2s. a cubic foot, if they were allowed to, and if they could get the timber. A man planning to grow poplars for matches would have to consider whether cheaper foreign supplies might not be available by the time the trees were mature. Anyone who thinks himself into a forester's position for a moment will see how speculative most tree-planting is; and the relatively sure and speedy returns offered by certain conifers will be appreciated. . . . At the present time, the risk of chestnut 'blight' must be weighed by anyone considering the planting of sweet chestnut: within the last 50 years this deadly disease has killed over 95 per cent of the chestnut trees over millions of acres of North America, and within the last 15 years it has become established in three widely separated areas in Italy. The spores of the fungus are carried by wind and by birds. Also of possible future interest is the London plane, now being studied as a possible tree for forest planting in Southern England, to produce timber for furniture. How would large plantations of plane trees look in the traditional landscape?

wood are uneconomic, it is likely to be neglected, and when the time comes for a forester to take charge of a territory where the gamekeeper has ruled for a century, the forester's first act will be to convert the jungle to high forest, or to clear-fell and replant the ground—very probably with conifers, since the demands for softwoods are greater and the returns are quicker as well as surer than those offered by hardwood high forest. (Nevertheless, beech is now the chosen or most favoured species for many of the State Forests in Southern England.)

At the risk of flogging a dead horse I would suggest that it is usually wrong, save in the special circumstances of 'protection forests' or amenity or museum woodlands of outstanding interest, to grow a woodland crop unless the crop can be sold. (I personally know of the failure of a Shropshire landowner this year to find a buyer for large quantities of yew—a furniture timber of great beauty and strength. In this instance the difficulty arose from the locality: the timber would doubtless have sold easily enough near High Wycombe.) As a general rule, a forester must be able to offer fairly large and regular supplies if he is to command a fair price. This applies even to the State Forests, to some extent, and was presumably one reason for those large-scale block-plantings of single species which have been widely criticized, the more so because in many areas the lay-outs were insensitive, with straight-line boundaries and straight fire-traces on hillsides which cried aloud for curves. In 1949 we still see the errors of, say, 1924, but it is fair to add that present practice has improved and there is now a stronger tendency to follow the principles succinctly explained in the following passage quoted from an article by Mr. Arthur Geddes in *The Scottish Forestry Journal*:

Afforestation at the government forest of Inverliever, Loch Awe-side, Argyll, shows how, in the last twenty years, planting based upon close botanical survey of the flora has led to 'landscape gardening' which could hardly have been equalled by deliberate design. . . . Briefly it (the method) consisted in noting the main 'plant communities and associations' (such as natural oak groves, rushes with certain grasses, mixed heaths and grasses, or heath alone), and planting on the patch mainly covered with one such 'community' the kind of tree which, as experience showed, grew best where that 'association' had been found.

. . . After a preliminary survey the head forester with his foreman staked out the area; a rough calculation of the number of trees that would be required followed, and the foreman supervised the actual planting. Thus little areas were formed, each naturally suited to be the habitat of some species of forest tree. These tree groups, though parts of one forest and of one forest plan, also revealed, in a new way, the forms and character of the landscape underlying the forest floor, where rectangular blocks, so practical-seeming on paper, would have given very variable growth on the ground. Whether one viewed the hill slopes across the loch, from a distance, or saw them as one walked through the forest, the picturesqueness of

¹ Incidentally, though Robinson is fully justified in this preference, which nearly every forester will share, the argument has a 'red-herring' aspect. Non-foresters who wish to appreciate modern forestry should generally look at a stand of timber (several trees close together) rather than at individual trees. Trees in the forest are not meant to be independent, but to be neighbours giving and taking shade and shelter to and from one another. The forester usually seeks to create and encourage a healthy community rather than individual 'heroes.'

scapes even in England where the characteristic conifer pattern is welcome, Bournemouth for instance (though not the New Forest). Our argument does not condemn the Christmas tree as intrinsically ugly; it pleads rather with the forester, who wants to plant conifers, to be discriminating, and to take into account the tremendous visual implications they bring to the landscape, and bring more quickly and drastically than any other tree.

3 . . . Grown in mixtures with hardwoods. On the contrary except with one or two special types such as the so-called Scotch pine the mixing of Christmas trees with hardwoods is visually—and we are talking here about visual effects—highly disturbing. The rate of growth is hardly the same and the tendency is for the conifers, isolated as they are, to stick out ragged points above the surrounding foliage. In winter, unless they are larch, they make spotty green islands in the bare plantations which succeed in destroying the sad harmonies of the brown woodlands.

4 Unfortunately conifer plantations are relative novelties in England . . . Surely very relative, very relative indeed. The present generation is as familiar with conifer as with any other plantations, taking England alone. But the present generation is also familiar as no other has ever been with the larger world of Europe and North America where the conifer plantations spread themselves out into endless forests covering thousands of square miles—provinces, countries, continents. The picture of a world of spreading oaks, and arable interspersed with some dear little plantations of harmless Christmas trees is utterly false; the real picture is exactly the reverse. Hence the landscapist (whose main concern is with the differentiation of landscape) views with grave concern a policy that will add the Scottish, Welsh and English Highlands to Scandinavia, Switzerland, the Black Forest, the Rockies and the Schaffhausen Falls.

5 'Its green is so peculiar and vivid, that, finding nothing to harmonize with it wherever it comes forth, a disagreeable speck is produced.' The insinuation here is that Wordsworth's views are out of date, but surely it is dangerous to dispense so easily with the views of poets whose business is to feel exactly what others only feel approximately; surely, where landscape is concerned, it is rash to dismiss Wordsworth, perhaps the most highly sensitized instrument of observation ever to express views on the subject. His ideas about the larch seem to the REVIEW to demonstrate once again his marvellous sensibility; there is nothing more disruptive of a general scene in the spring than the spotty effect of single larches disposed in a broad leaf plantation, their very structure alienating them from the deciduous trees and allowing neither of harmony nor of the right kind of contrast. In his cunning Mr. Ward implies that to enjoy larch one must be ultra avant-garde and he thus nefariously seeks to create snob-value for the conifer. The truth is, of course, that the vast indiscriminating public adores the larch and the Christmas tree; it is only the fastidious who unwillingly perceive its limitations. The point is—are we willing, under the duress of forceful economic argument, to forgo what is left of the English agricultural-park landscape (when all is accounted for, not a very extensive part of the country) and accept its merger into one vast conifer forest? Or, do we say, recognizing this particular landscape as the unique work of art it is, 'Plant conifers for utility and profit if need be' (and as Mr. Ward himself says, it may be only a temporary need) 'in places suitable for them, such as the more gloomy parts of the north of England, and forbid their planting in the park landscape of the Midlands and the south.' A strong economic argument could no doubt be made in favour of the older landscape, on grounds of attracting 'hard' tourist currency.

this genuinely scientific planting was remarkable. . . .

That, the amateur of landscape may exclaim, is admirable: if that practice is followed in the Midlands and the South, we need fear no excess of conifers but can look forward to oak and beech and hornbeam, chestnut, sycamore and robinia, to ash on the limestone, to alder and birch and the beautiful whitebeam that loves the chalk. The forester, however, must remember the principles of economics with those of ecology, and he may say bluntly that his first job is to grow timber economically, and ecological principles must be exploited to this end rather than to the preservation of landscape.³ Incidentally, the forester is usually much better aware than the amateur of landscape of a dilemma (which often exists on ground which is neither very good nor very bad) to be stated thus: 'Here I can probably grow a good, quick, profitable crop of conifers but that will mean some soil degradation, and there will be a risk of pests and disease. My alternative is a poor, slow crop of hardwoods, which will almost certainly mean a financial loss, but "the amenities" will be preserved—for people whose pockets are not affected!'

Mixed crops of conifers and broad-leaved trees might in many places seem ideal but the need to offer timber in fairly large, regular and evenly graded quantities is one of the factors telling against mixtures. Mixtures are also more difficult to manage: that is, they require a higher degree of skill in the forester—and this country cannot yet boast a tradition of skilled forestry. But where larch or other softwoods are needed for local use, they could well be grown in mixtures with hardwoods³, without any damage to the landscape.

* * *

Having written against pure conifer plantations in most of the southern half of the country, I should like even at the risk of repetition to make certain remarks in favour of conifers (since this is no anti-conifer diatribe), and two or three other points may also be advanced for the consideration of lovers of landscape.

(1) There is no claim that conifers are not beautiful. Indeed, it is high time that the beauty of conifer forests, when situated in true conifer areas, was better recognized, and people should learn to appreciate the upward thrust, the classic regularity and the shaded peace of the conifer forests. Unfortunately conifer plantations are relative novelties in England⁴: true though it is that 'sweets grown common lose their dear delight,' it is even more generally true (as architects know) that few people can appreciate novel forms of beauty. The newly flushed larch in Spring is now considered beautiful but a century and a half ago larch was a novelty in England, and Wordsworth, denouncing the species in general, noted particularly how 'its green is so peculiar and

³ Another practical point overlooked by many non-foresters relates to the value of thinnings from young plantations. With certain minor exceptions (such as ash for bean rods and clothes props) the thinnings of broad-leaved trees under twenty-five years of age are of very little or no value. But the thinnings of such trees as larch, Douglas fir and western red cedar are useful and salable by the time the trees are fifteen years old. Norway spruce thinnings may serve as Christmas trees, and even Scots pine will make stakes under the age of twenty years.

vivid, that, finding nothing to harmonize with it wherever it comes forth, a disagreeable speck is produced.⁵ When this is recalled, there can be no surprise that lesser pundits today utter philippics against 'regimented conifers, all exactly alike' or 'ranks of stark Christmas trees, goose-stepping on the fells.' Also, the briefest glance at sylvan aesthetics should include a reference to that idea of functionalism now recognized in buildings, in ships, in aeroplanes, and indeed almost everywhere except in the woods and forests. Is it there inapplicable? Can only foresters appreciate the beauty of fitness in forests of well-grown timber?⁴

(2) Special caution is necessary in advancing the claims of oak as a timber tree. Though oak will survive in many places, it will thrive in relatively few, and even there its cultivation must be expected to show a loss. The Forestry Commission's action in planting oak in several of the best State Forests may yet be right (certainly it will be approved by all lovers of tradition and landscape) but the early nineteenth century practice of planting oak almost anywhere was deplorable. Though Britain is short of first-class oak (for which there is likely always to be a good demand) we have even now, after two timber-consuming wars, a surplus of low-grade oak. Comparably, first-class sports ash (for tennis racquets and other vital needs) is always in keen demand, and more ash might well be grown, since England's best is certainly not surpassed and probably not equalled by the ash of any other country in the world. But ash is a most exacting species and prime timber cannot be produced everywhere: the lower grades of over-aged ash (most first-class ash timber comes from trees aged between forty and sixty years) are far less profitable.

(3) In her recent book *Land and Landscape* Miss Colvin mentions Humphry Repton's deduction (made about the same time that Wordsworth was distinguishing himself as a critic of larch) of the 'rule' that classic architecture accords best with vertical trees, and gothic architecture with the rounded forms of hardwood trees. This generalization, though it may contain an interesting idea, should not be swallowed whole as the whole truth. Vernacular timber houses, of angular and predominantly gothic character, need make no grovelling apology for their appearance among the Scandinavian forests, nor should the gothic character of an English manor house be held to forbid the planting of conifers nearby. In places where conifers are considered unsightly or inappropriate scenically, but are yet needed for timber or shelter, appearances may sometimes be preserved by planting a deep hard-

wood belt or edge to the conifer plantation. In steep hill country this device tends to be less effective than in flat or mildly undulating territory, and it should certainly not be used everywhere, indiscriminately, to encourage people to think that conifers are always ugly and always to be hidden so far as possible. At the moment there seems to be a risk of this latter development.

(4) Once again, apparently minor factors overlooked by the amateur of landscape may be of major importance locally. The already-mentioned influence of rabbits on forestry is perhaps too well known to need emphasis (in many areas the cost of anti-rabbit fencing doubles the cost of establishing plantations and affects the whole policy of Treasury grants) but grey squirrels must also be remembered. Beech and sycamore are probably the two favourite objects of their attack, and their favourite habitat is precisely the open deciduous-woodland landscape, suggestive of a vast park, which is judged specially worthy of preservation. A year or two ago an authority wrote that he thought grey squirrels, if unchecked, would render the establishment of plantations in some chalk areas in Surrey impossible.

* * *

Enough has been said to show that the foresters' problems are complex, and that modern forestry is not so stupid as some people think. Yet two or three points remain clear. If the ecological principle of 'conifers should be grown on poor soils most fit for conifers' is accepted, then the complementary 'broad-leaved trees should be grown on the better soils fit for broad-leaved trees' should also be accepted. Broad-leaved trees represent a higher form of development than conifers; they are the natural successors of conifers; and they are mostly soil-improvers. (The soil-improving qualities of beech, hornbeam, birch and alder are famous.) To make conifers the successors of broad-leaved trees, after clear-felling, is generally regress and not progress. This is the more true since pure conifers, planted on land where broad-leaved trees have prospered, must usually lead to some degradation of the soil, and that offends against the general principle that farmer or forester should leave the soil as good as (or better than) he found it. This aspect of the subject merits special attention at the present time, first because forestry is now being taken more seriously than ever before, and much larger public funds are being spent on the country's woods and forests; and second, because the present activities of foresters include the replanting of broad-leaved woods clear-felled during the war—whereas before the war most planting operations consisted in the afforestation of land where no trees had grown before.

(At the same time, critics who object to a new rash of young pine trees here or there in Southern England should not forget the principles of succession. Many of the beechwoods of the Cotswolds and the Downs were established with Scots pine nurses, and the fact that even now pines are being planted in large numbers on the chalk does not necessarily mean that the foresters are trying to grow pitprops or deals. The pines may be—indeed, certainly are in most places—the necessary pioneers which prepare the way

for a successor crop, probably beech. The stage at which the successors can take over is a matter of dispute and may vary with circumstances, but a theory of accelerated succession was propounded by the chairman of the Forestry Commission during the war, and it is now thought that beech may in some areas succeed, as the dominant species, within ten or twelve years. Anyone who is offended by young conifer plantations in Southern England should therefore make sure, before he denounces any particular plantation, that it is intended to last, and is not merely a short-term pioneer or 'nurse' crop to facilitate the growth of broad-leaved trees.)

How, or how far, the planting of conifers to make timber in broad-leaved country might be restricted or discouraged by legislation is another matter. The covenant and lease by which the Forestry Commission holds Savernake Forest includes some restriction on the planting of conifers within the central forest area, and now, under Clause 28 (1b) of the Town and Country Planning Act an authority is empowered to order the replanting of woodlands felled by permission under the Act, and the nature of the replanting may be prescribed. Evidently, then, an owner might be forbidden to replace a crop of oak or beech with western red cedar or Corsican pine. (Mr. A. D. C. Le Sueur of the Royal English Forestry Society has commented on this position and suggested that an owner forbidden to plant a more lucrative crop might 'appeal to the Forestry Commission and leave the Ministries concerned to fight it out!') Woodland that has been dedicated to forestry under the Dedication Scheme and all plantations made with the aid of government grants lie outside the provisions of this particular Act, but there would be no adventure into a new principle if a national or regional authority were granted power to say, 'We cannot have conifers in such and such positions.' But landowners desiring to plant conifers might reasonably ask for compensation.

Also, the general nursery-governance tendency to be constantly legislating against this, that or the other still seems objectionable to a minority of dark-age reactionaries who are not yet fully reconciled to the idea of having their business minded for them—not even by indifferently successful trade union officials. (Today laws are multiplied as never before: the ten commandments have long since been judged inadequate and life is indeed complicated: even to grow canary food is a serious and punishable offence.) In the light of these circumstances, positive inducements to plant broad-leaved trees might well be preferred to further additions to the long list of prohibitions. There might be more sharply differentiated subsidies and/or guaranteed prices for hardwoods; yet even here there must follow a final footnote illustrating the complexity of the problem. If subsidies from public funds are to be paid, common prudence would require some measure of inspection or approval (as in the existing dedication scheme), for otherwise foolhardy or ill-informed landowners might be encouraged to plant such exacting species as oak and ash on sites where these species were foredoomed to fail.

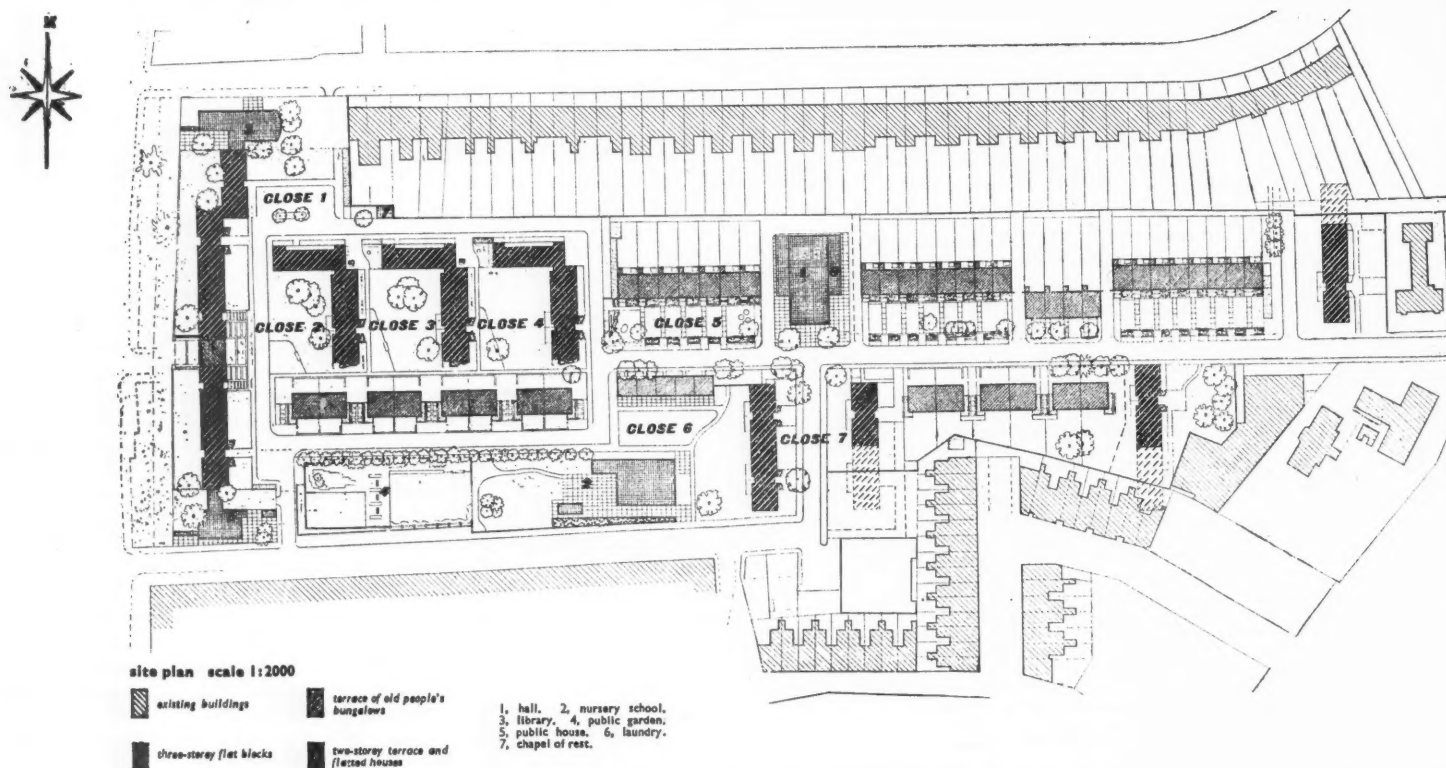
⁴ Apropos of functionalism, some of the marginal editorial comment and quotations on page 108 of the September REVIEW might be most appositely recalled. N.B.—the cultivation of trees in close association is 'functional' not only for the production of timber: the trees' habit or shape is functional for their prosperity or survival in a dense society: roots, boles and crowns are adapted for this kind of existence. The point deserves to be stressed. If a few scattered trees, grown in dense forest for fifty or one hundred and fifty years, are spared when all around are felled, they are very likely to be blown down, or even to be broken, or simply to die back—to 'die of fright' as some Continental foresters say. Once again, the trees of a forest should be viewed not as independent individuals but as interdependent members of a society.

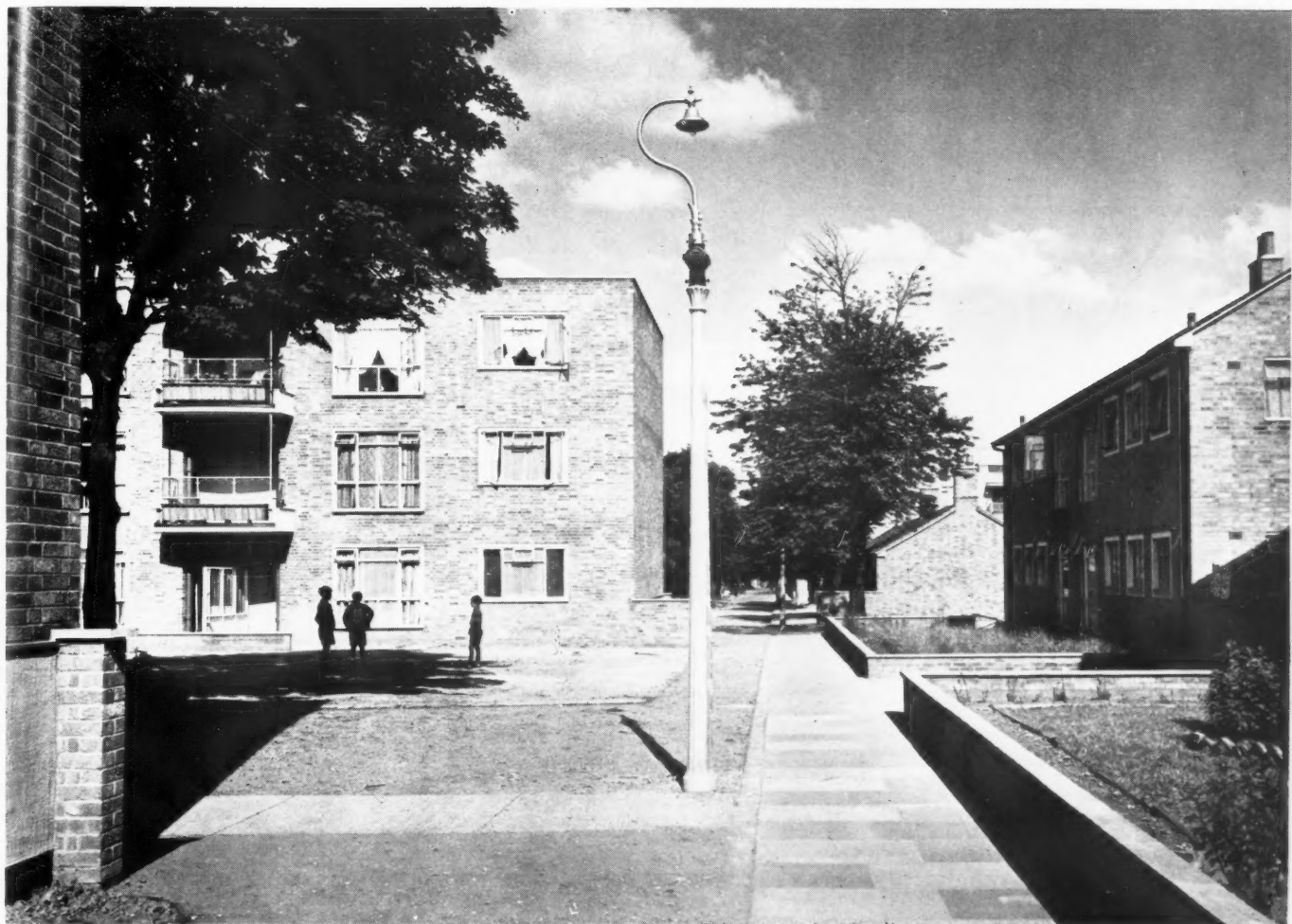
HOUSING AT HACKNEY

The fundamental difference between the house and the flat block, from the visual planner's point of view, is that the former is related to a private garden, while the latter is part of the larger landscape. Housing estates in this country generally take one of two forms—small two-storey houses with private gardens on the perimeter of towns, or flat blocks without gardens in central areas. At one extreme is the 'cottage estate' of the L.C.C., with thirty-odd people to the acre; at the other, high density flat development, with anything up to two hundred.

The Somerford Estate at Hackney, the first part of which is now complete, is an essay in *mixed development* and represents an attempt to design an environment which should have both an urban scale and visual variety. Although pre-existing conditions, together with the high density required (about 100 dwellings per acre), were restrictive, the scheme illustrates very well the possibilities latent in the thorough mixing of different building types.

The plan is clearly based on the precinctual theory, with interconnected squares, throughout which the pedestrian receives priority. Apart from the brilliant handling of this major design problem, the attention paid to planting and to such details as external floor surfaces shows an understanding of what the contemporary landscapist's job is about, which is still all too rare.



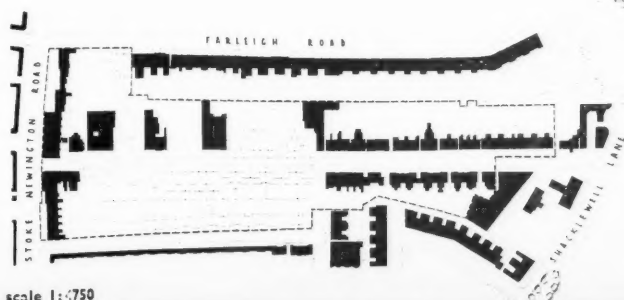


HOUSING AT HACKNEY

FREDERICK GIBBERD, Architect, in association with G. L. DOWNING, Borough Engineer.

1. above, Close 4, looking east; on the left is a three-storey block of flats; on the right a two-storey block of flatted houses with the old people's terrace houses beyond. Below, the site as it was before replanning.

the site to be developed is 9 acres, of which 5.67 acres are to be built first; the nett housing area of this first part is 4.29 acres and the density is 104 persons per acre. A long straight road bisected the site originally, but a section of this has been built over, and a new road pattern devised; traffic is no longer tempted to cut through the estate. Provision is made for service roads parallel to main roads, so that the precinctual plan form can be extended north and south with a minimum number of main road traffic intersections. Although re-designed, the site was not swept clean, and



scale 1:750

existing trees, paths, services and buildings of interest were retained.

building types there are five distinct types of dwelling, permitting considerable choice for family needs.

- a Three-storey blocks of flats; these are two- or three-bedroom, with direct access in pairs.
- b Single-bedroom and bed-sitting room flats with gallery access.
- c Two-storey blocks of two-bedroom flatted houses, each with a small private garden.
- d Two-storey terrace houses, with three bedrooms, dining room, kitchenette and private garden.
- e Terrace of single-storey bungalows with bed recess; these are for old people, and each extends on to a small paved garden.

plan the different types of buildings have been grouped to form a series of closes, each with its own character. To obviate any feeling that the closes are culs-de-sac or dead ends, the buildings are arranged to give vistas across the site; these are generally diagonal between buildings of different character, and no close has been built into a solid square or disposed rigidly and symmetrically. As the density is high, large areas of paving are laid, enabling free use of the open spaces without spoiling grass areas; contrast and interest in this paving are obtained by the use of various materials—gravel, stone, tarmacadam, concrete. In the centre of the estate is a small hall and a laundry, which is equipped with washing and drying machinery; to the south of this is to be built a small nursery school; sites adjacent to the main road are reserved for a public house and a library.

construction is generally of load bearing brick walls. Ground floors throughout the scheme are concrete; floors and roofs to the flat blocks are hollow tile reinforced concrete, and in other buildings are timber. Public staircases and landings are reinforced concrete finished in non-slip granolithic.

external finishes the flatted houses are in pale pink/putty-coloured brick and buff lime cement rendering with slate roof; slightly warmer tones of the same material being used for the flat blocks. Warm brick and rendered panels alternate on terrace house walls, and the roofs are dark brown pantiles. Dark red and blue bricks are used for the walls of the Old People's Home, and a small dark brown pantile for the roof. To give additional surface interest to the brickwork, the bond is one header to two stretchers, and panels of bright coloured glazed tiles are incorporated.

internal finishes all floors are dark brown asphalt with quarry tile insets in kitchens. Ceilings and walls of

(contd. on page 149)



2

front elevation of two-storey terrace houses. Close 5 contains a terrace of seven of these houses, each with its garden.



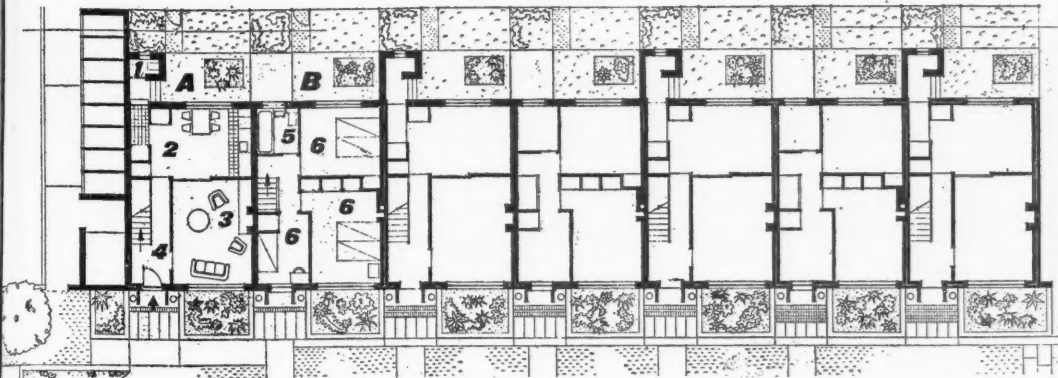
3

rear elevation of two-floor flatted houses, grouped in pairs, giving four flats to a block. These face Closes 2, 3 and 4.



4

south façade of terrace of five old people's bungalows between Closes 5 and 6. Living rooms open on to a paved court.

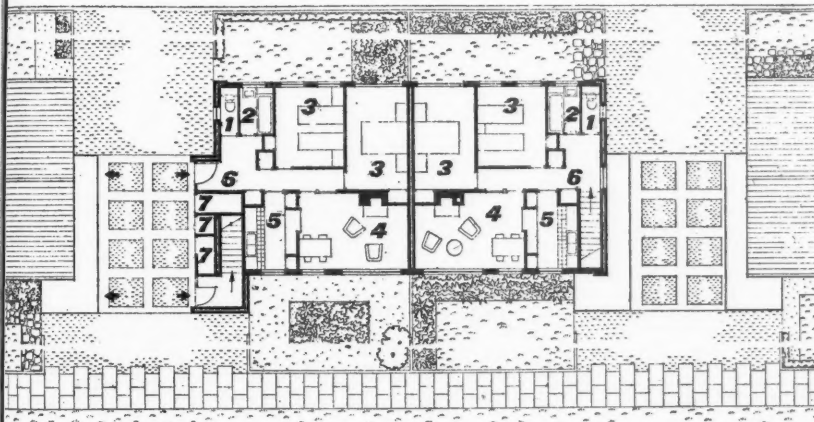


south elevation and plan of two-storey terrace houses. scale 1/32 in.=1 ft.

A typical ground floor

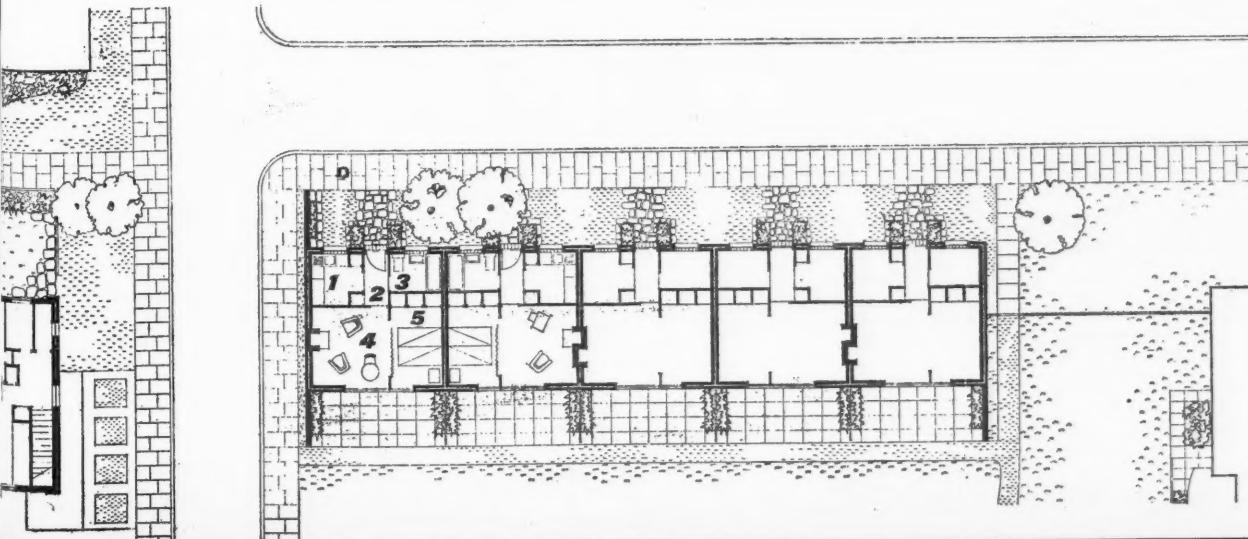
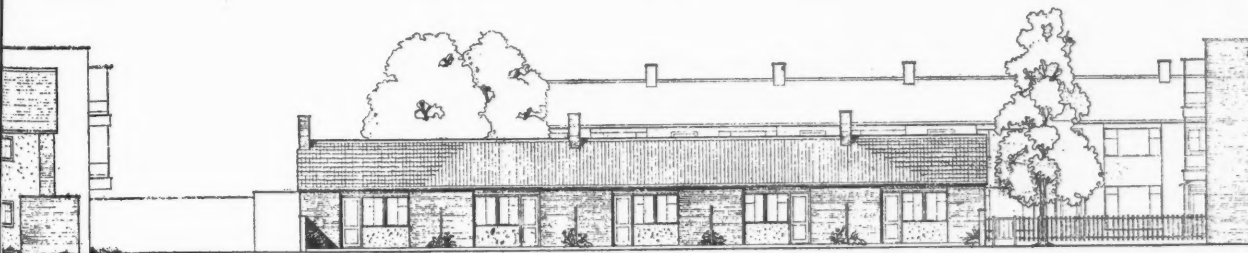
B typical first floor

1, toilet. 2, dining room and kitchen. 3, living room. 4, entrance hall. 5, bathroom. 6, bedrooms



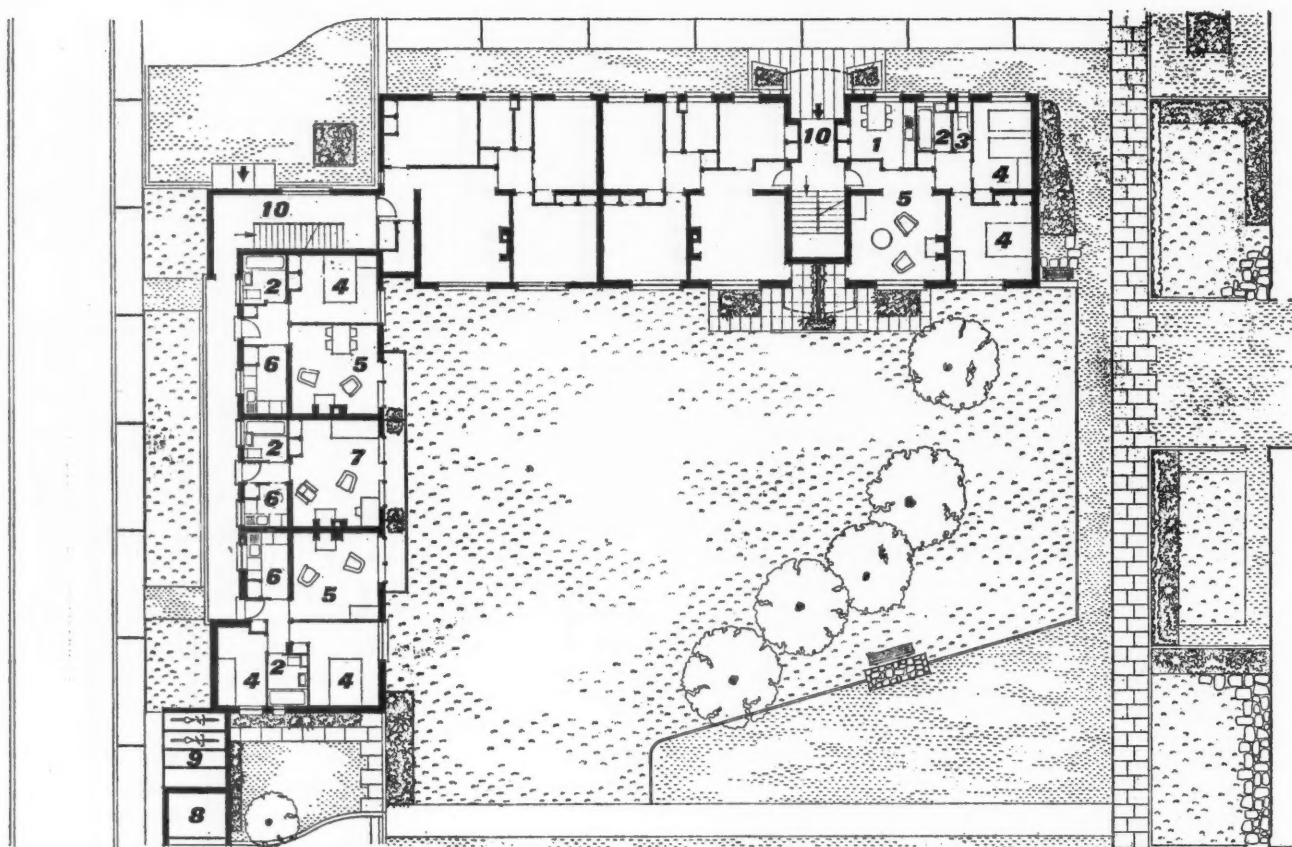
south elevation and plan of two-floor flatted houses. scale 1/32 in.=1 ft.

1, toilet. 2, bathroom. 3, bedrooms. 4, living room. 5, kitchen. 6, entrance hall. 7, ground floor stores for both flats.



south elevation and plan of old people's bungalows. scale 1/32 in.=1 ft.

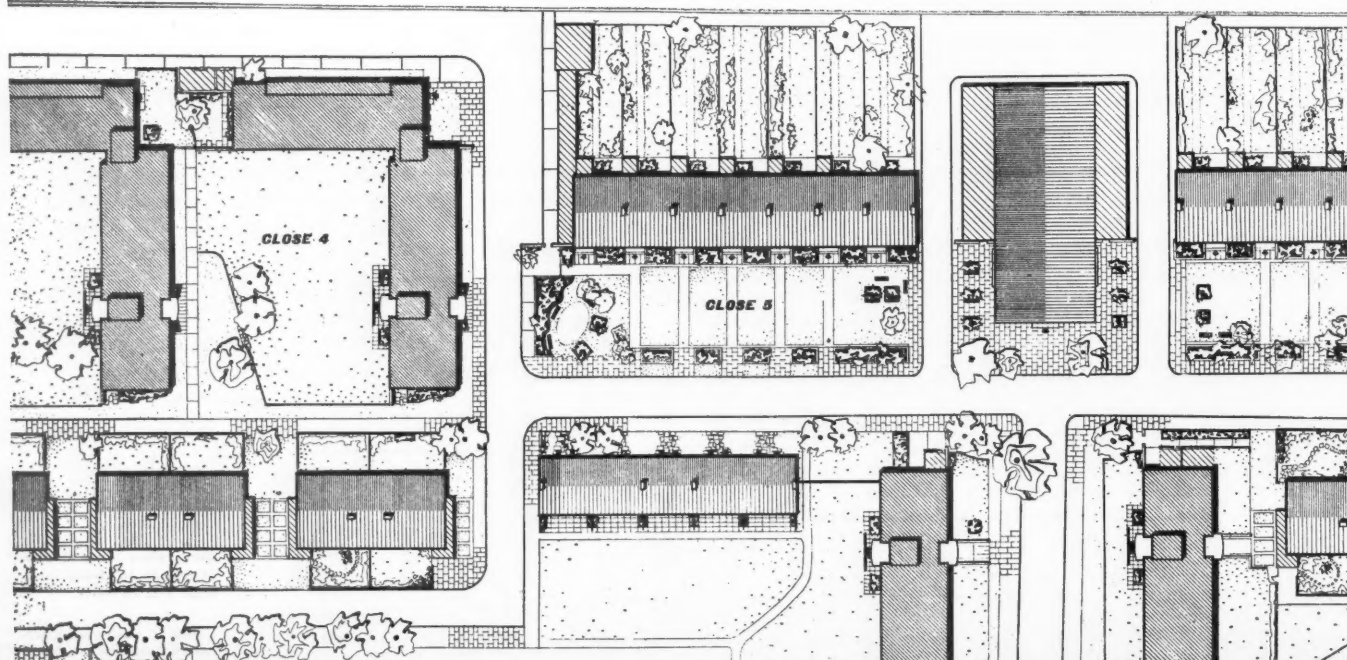
1, kitchen. 2, entrance hall. 3, bathroom. 4, living room with door to paved terrace. 5, sleeping recess.



above, west elevation and plan of three-storey blocks of single and two-bedroom flats in Closes 2, 3 and 4. scale $1/32$ in. = 1 ft.

1, dining room/kitchen. 2, bathroom. 3, toilet. 4, bedrooms. 5, living room. 6, kitchen. 7, bed-sitting room. 8, refuse. 9, cycle store. 10, entrance hall.

detail of site plan scale $1/64$ in. = 1 ft.





5

elevation of three-storey blocks of flats in Closes 2, 3 and 4, from the south. This wing in each close contains the smallest flats, which have access from galleries at the rear. These galleries are shown in 6 below.



6

HOUSING AT HACKNEY

(contd. from page 146)

kitchens, bathrooms and W.C's are painted; white glazed tile is used for splash-backs in kitchen and as a dado in bathrooms; all other walls are distempered. Entrances are lined with blue-grey frost-proof tiling; stair wells have terrazzo dados with textured rendering above. Balustrades are of wrought iron with hardwood handrails. Fireplace surrounds and hearths are terrazzo. **equipment** heating in living rooms is by solid fuel grates which supply heated air to one bedroom by a simple duct; all bedrooms are wired for electric fires. Hot water is provided by immersion heaters in linen cupboards; and an electric displacement heater is fitted in kitchens. The terrace houses also have a boiler behind the living room fire. All kitchens are equipped with storage cupboards, larder, hanging pot-racks, and storage space; a vitreous enamelled metal sink and drainer unit is built in, and gas and electric supply is provided.

miscellaneous all dwellings are piped for gas, with points provided. The electrical installation is on the ring main system, and at least two universal plug points are fitted in each room. Plumbing is one-pipe type, contained in easily accessible ducts; hot and cold water services and wastes are in copper tubing.



7



8

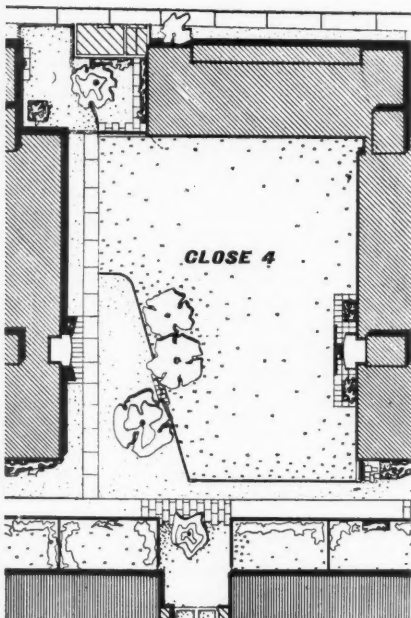


9

HOUSING AT HACKNEY

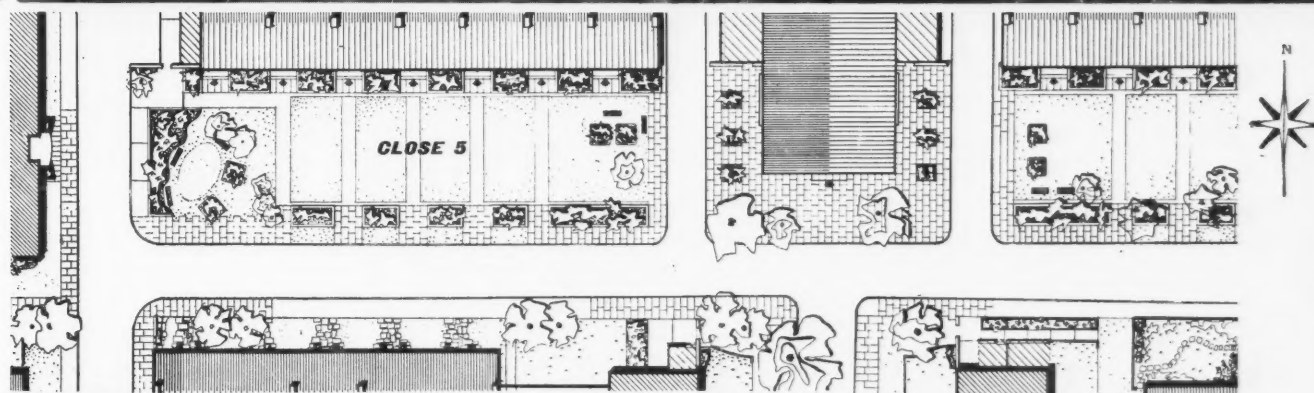
close 4

7, looking across the Close to the east ; on the right is the rear façade of a three-storey block of flats, showing the spacious private balconies over the entrance to the common stairway. Beyond the flats, forming the south side of the Close, is one of the groups of two-floor flatted houses. 8, entrance to Close 4 in the south-east corner, from outside ; on the left is the end elevation of a group of flatted houses ; the east façade of the flats of Close 3 is seen through the trees. 9, the Close, and its south-east entrance, from the west. Three of the estate housing types are in this view ; flat blocks on the left, flatted houses right, and the old people's bungalows just outside this close ; flat blocks are seen again beyond.





10



11

close 5

10, a view from the south-east, showing the south elevation of the terrace of seven two-storey houses. Each house has its own entrance and garden plot facing the Close, and its own private garden is sited on the north of the terrace. The main entrance in the east façade of the flats of Close 4 is beyond the terrace. 11, looking in to Close 5; flatted houses on the left and, right, old people's bungalows and terrace houses beyond them.

HOUSING AT HACKNEY



12
13



14

12, detail of door to bungalow for old people, 13, terrace of old people's bungalows, from the north, with flat blocks of Close 7. 14, block of flats in Close 7, with flatted houses lining the transverse estate road.

TOWARDS AN ARCHITECTURE

POST - WAR SCHOOLS IN BRITAIN

Housing, schools and factories are the three categories of building exempt from the ban on capital expenditure which caused the indefinite postponement of so many building projects when it was imposed a year ago. Schools are also of special importance just now because of the immense building programme demanded by the new Education Act and the contribution well-designed buildings can make to the evolution of improved educational methods. They are therefore made the subject of the second of the REVIEW'S studies of post-war building achievement, in which the standard reached and the trends discernible in Britain in the more important branches of architecture are being discussed. The first article, published in October, 1948, dealt with small houses. The third, on flats, by Lionel Brett, will appear later this year.

THE PROVISION OF buildings for education, though relatively a very small proportion of the national investment programme, has already reached a level approaching that of the years before the outbreak of war in 1939. Requirements, apart from the raising of the compulsory school leaving age, centre round the recent steep rise in the birth-rate, provision to keep pace with the development of new housing areas and urgently needed improvements in technical education. For the future there remains the replacement of many obsolete and badly sited schools.

In the years 1947 and 1948 building projects to an estimated total cost of £48,500,000 were approved by the Ministry of Education. The programme for 1949 recently announced by the Minister totals £50-55 million.

As might be expected County Councils have greatly expanded their architectural staffs in an endeavour to handle the great volume of work themselves. In spite of this they are finding it increasingly difficult to fulfil the requirements of their programmes and in many cases private practitioners are being called upon to help. Some authorities, too, prefer to have their

work done by private architects, more particularly, where their school building programme is not likely to be a continuing commitment. At the same time they are turning to various prefabricated or factory produced units owing to acute shortages of site labour, steel and timber and in the hope, often illusory, of achieving economies thereby.

What effect is this great building activity to have on the architectural scene? Here, if anywhere, we should be able to observe the growth and maturing of a contemporary architecture. For, not only are the demands of economy and speed of construction compelling the use of new techniques, but so also are new methods of education and standards of accommodation. In what ways, therefore, are these new factors finding aesthetic expression in contemporary school building? In all theoretical consideration of architecture during the first four decades of this century the idea that plan and expression must constitute one formal unity and that a building must be expressive of its function was fundamental. In school buildings, then, we must expect some recognition of the changing views on education, of the trend towards

understanding rather than indoctrination.

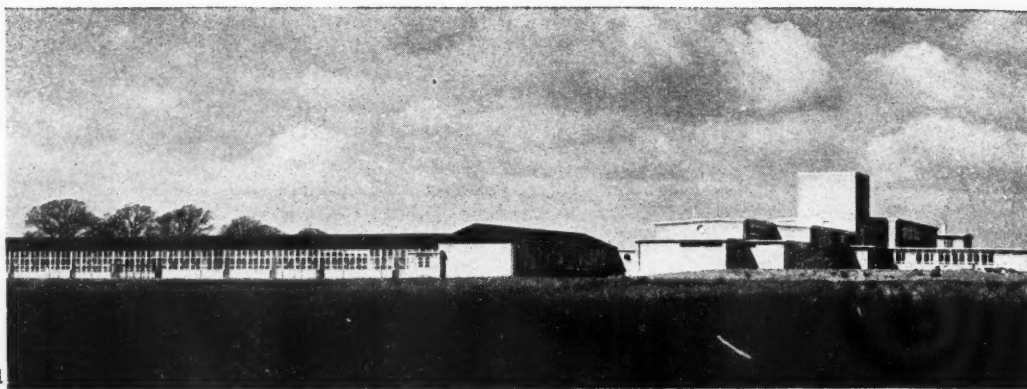
It were idle to pretend that a complete picture of a contemporary architecture can be gained from the examination of one particular category of building. None the less, a study of contemporary schools, through the very restrictions of the programme under which they are built, and which are characteristic of the building requirements of our time, enables some tentative conclusions to be reached on trends in contemporary architectural expression. The comprehensiveness of the requirements of Education Authorities enables the significance of variations in design to be appreciated. This is not the place to discuss the limitations of the programme, for the appearances of a building, its impact on the observant passer-by must of necessity be separated from the complex requirements presented to the architect. It is perhaps unfortunate for the architect that the critic is frequently unaware of the special difficulties of the case, but there it is. A fine building achieves its effect in spite, indeed often because, of these difficulties.

Behind all contemporary school design lies the Butler Act. Before this far-reaching

measure became law, the requirements of educational buildings were comparatively loosely defined, minimum standards were low and great freedom was allowed to the various educational bodies concerned in setting their own programmes. Today there is unified control through the Ministry of Education, covering many aspects of design formerly the sole province of the architect. Building requirements have been extended and minima greatly increased. One of them alone, the daylighting standard, determines the major elements of the school buildings and constitutes the architect's chief problem.

Experience so far suggests that the new school building programme has outstripped architectural, material and technical facilities. The emphasis on speed encourages the architect to get plans drawn, tenders out and buildings up before there is time to think or learn. Stock solutions, together with the latest economy memorandum are apt to be regarded as a Ministry-sent aid to the beleaguered school architect. A temptation to which all too many of them seem to have succumbed. Fast and cheap are not adequate slogans where the environment for the education of children is concerned. Nevertheless, if this enormous building activity is not to exceed the economic resources of Education Authorities, it must be carried out at cut prices and as far as possible must not divert labour from other building work of an even more urgent nature. These problems are a challenge that many architects have not been able to meet, or have only solved at the cost of a sacrifice of quality in design.

In estimating what the Americans would call current design trends it is necessary to



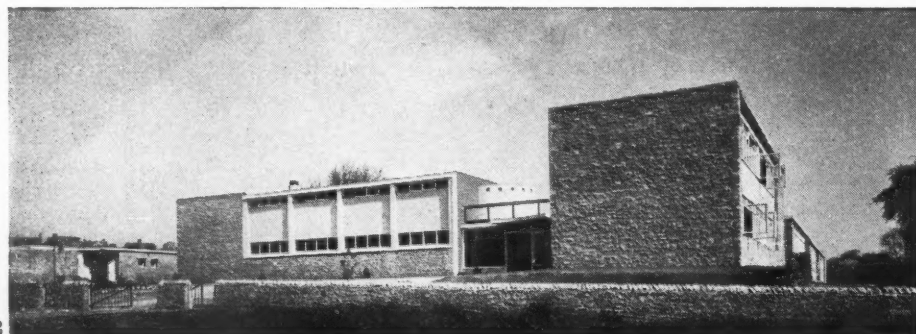
1. Field End Primary School, by Howard V. Lobb. Although undoubtedly an adequately functioning teaching machine, its various elements lack harmony, and there remains much of the institution in its expression.

distinguish the trees from the wood. The architectural landscape is formed both by the jungle of the average and the focal point of the specimen tree. The latter may well exert a powerful long term influence, but it is the former that goes to make up our environment. It has indeed been argued that the average should attract the chief attention since it more accurately reflects the conditions and achievements of the day. From the point of view of architectural criticism, however, only the best that architects can achieve can be regarded as adequate, and worthy of detailed consideration.

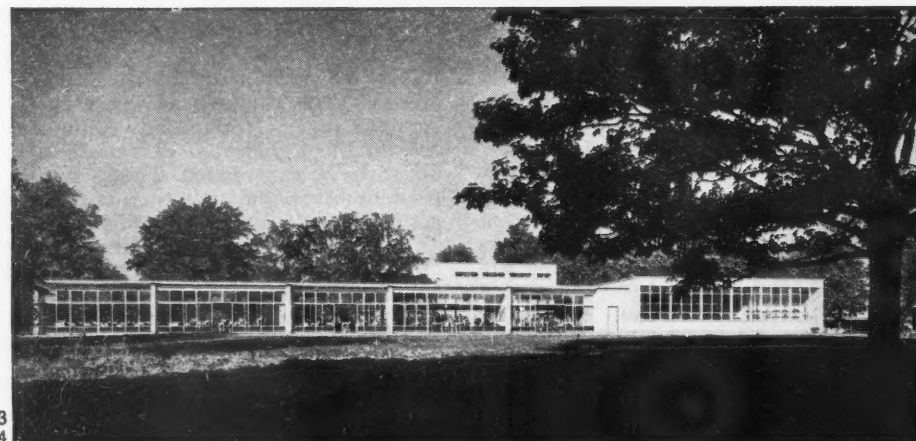
Let us now turn to some outstanding examples of post-war schools. The first one to be completed since the war provides a convenient starting point. Field End Primary School at Eastcote was designed by H. V. Lobb for the Ministry of Works to repay a debt of honour to the Middlesex County Council. It accommodates four

hundred boys and girls. The school was erected extremely quickly and very economically, in spite of the extensive use of brick which is apt to be a slow material with high labour costs. Though great pains have clearly been taken to give appropriate expression to the two basic elements of the school—the teaching units and the assembly and dining units, and the work is obviously that of an experienced architect, it cannot be regarded as an entirely satisfactory solution to the aesthetic problem. The common basic element of all contemporary schools is the classroom or teaching unit of largely standard dimensions.* The size of the windows is determined by the lighting characteristics laid down and these also determine the height of the classrooms themselves. In the school under consideration the classroom unit

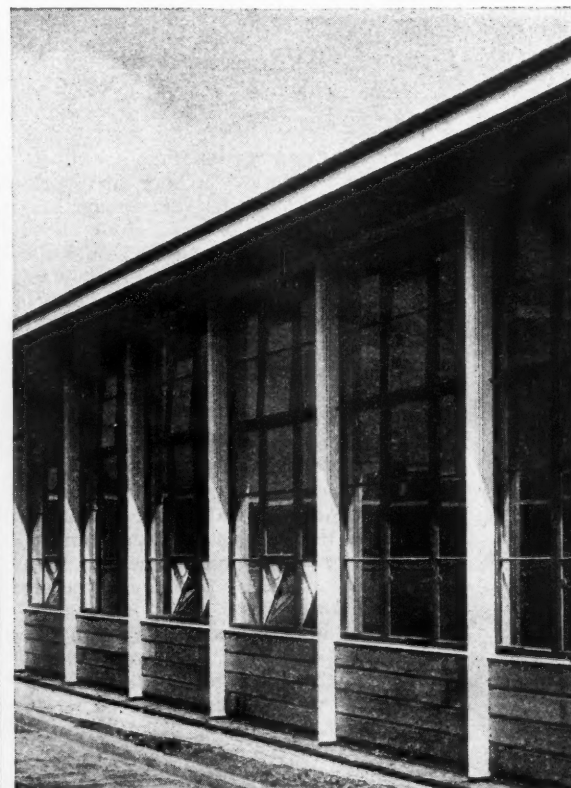
* Indeed so far has the standardization of this element gone that it is possible to buy them ready-made in aluminium.



2



3



4. part of a school in West Sussex by C. G. Stillman; a pioneer building in light standardized construction and a prototype for later prefabricated schools.

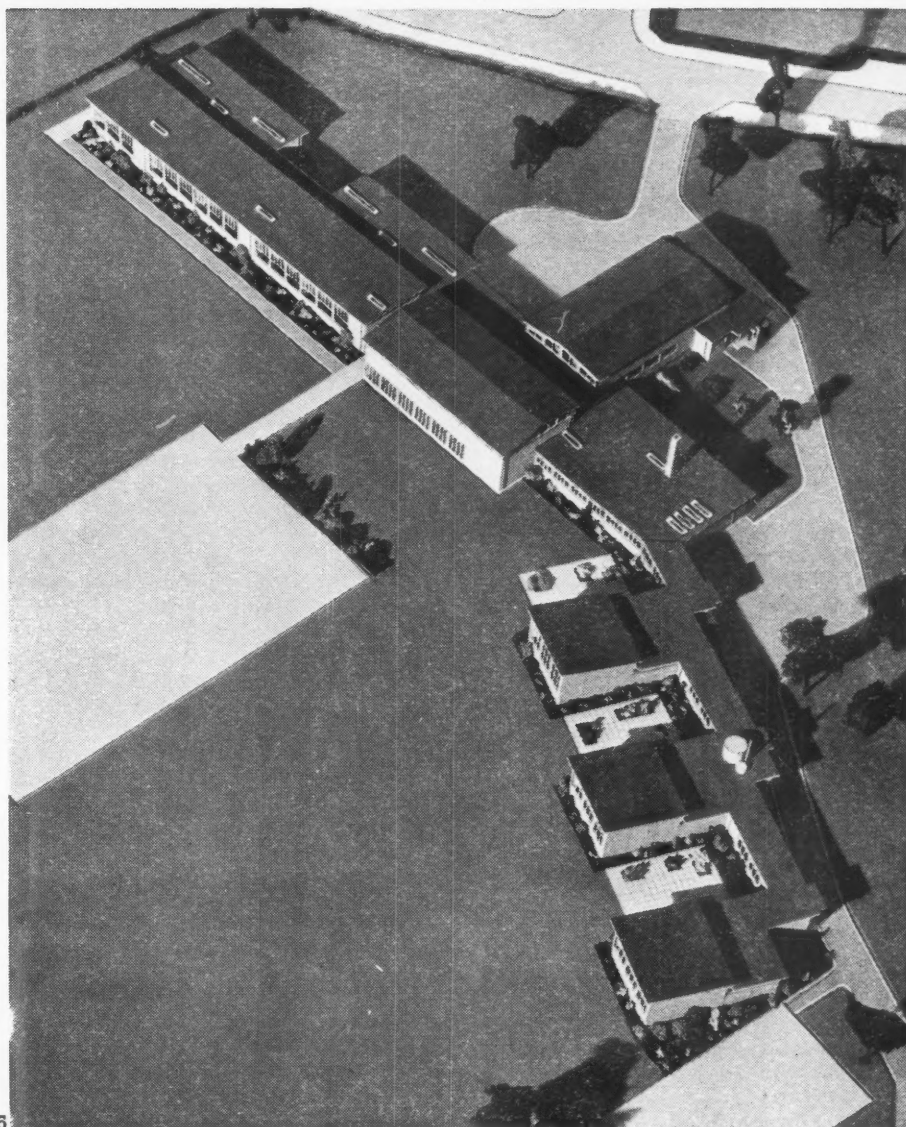
appears to be regarded merely as a dimension in length, to be measured off in appropriate sections with the requisite corridor alongside.* In fact, the whole group, the long strip of classrooms with its pitched roof, the jumbled rectangular masses of the assembly hall, dining room and kitchen is an uneasy combination. Even the use of brick throughout fails to produce a harmonious relationship of the parts. The architect has obviously tried to avoid the institutional atmosphere, but he cannot be said to have been entirely successful. There lingers the impression of a teaching factory and not a building within which children will learn, play, understand and grow. The spaces inside are dry and hard, each volume cut off by the next, looking down the main corridor to the classroom block one can imagine the exact impression of each part of it—there is no variety in the visual impressions. What is more, external massing has been achieved, in some cases, without regard to the actual relationships of internal volumes. Nowhere is there anything to suggest that the individual child has been set at the centre of the problem. A final point—it is not sufficient to put a long strip of paving parallel to the classroom block, divide it up with flower beds and label it on the plan 'outdoor teaching space.' It is, of course, obvious that any such appraisal of the completed building does less than justice to the problems that beset the architect. It may well be argued that the requirements are so standardized that the architect has little opportunity for anything more exciting within the limits of time, material shortages and the need for extreme economy.† It is precisely here, however, that the challenge to the contemporary architect lies.

There are already a number of schools designed on a very different basis, which, in my opinion, have given a more vigorous response to this challenge. Not only do they show a closer understanding of contemporary planning requirements, but also of the results of recent technical research. However their appearance marks no sudden revolution and, before discussing their merits, it is only fair to record one or two pre-war pioneering efforts to which they owe so much. Outstanding of these was the secondary girls' school at Richmond in Yorkshire designed by Denis Clarke Hall, and built in 1939. The satisfactory rhythm of window and solid wall, the relation of surfaces and textures, and the conception of the whole school as a single formal problem were all very skilfully handled. In addition the relation of the school to its site was as carefully studied as the relation of the various buildings to one another.

Of course the Richmond school is not

* An even more exaggerated example of this yardstick expression can be seen in the Open Air School at Swinton and Pendlebury, though here the blocks are shorter. It is with a certain amount of justification that the advertiser who makes use of a photograph of the school captions it with the words 'What goes on here?'

† Here it should be pointed out that there has been considerable exaggeration of the degree to which standardization of technical requirements has so far gone. The truth of this should be evident from a study of the very varied solutions recently devised for school structures.



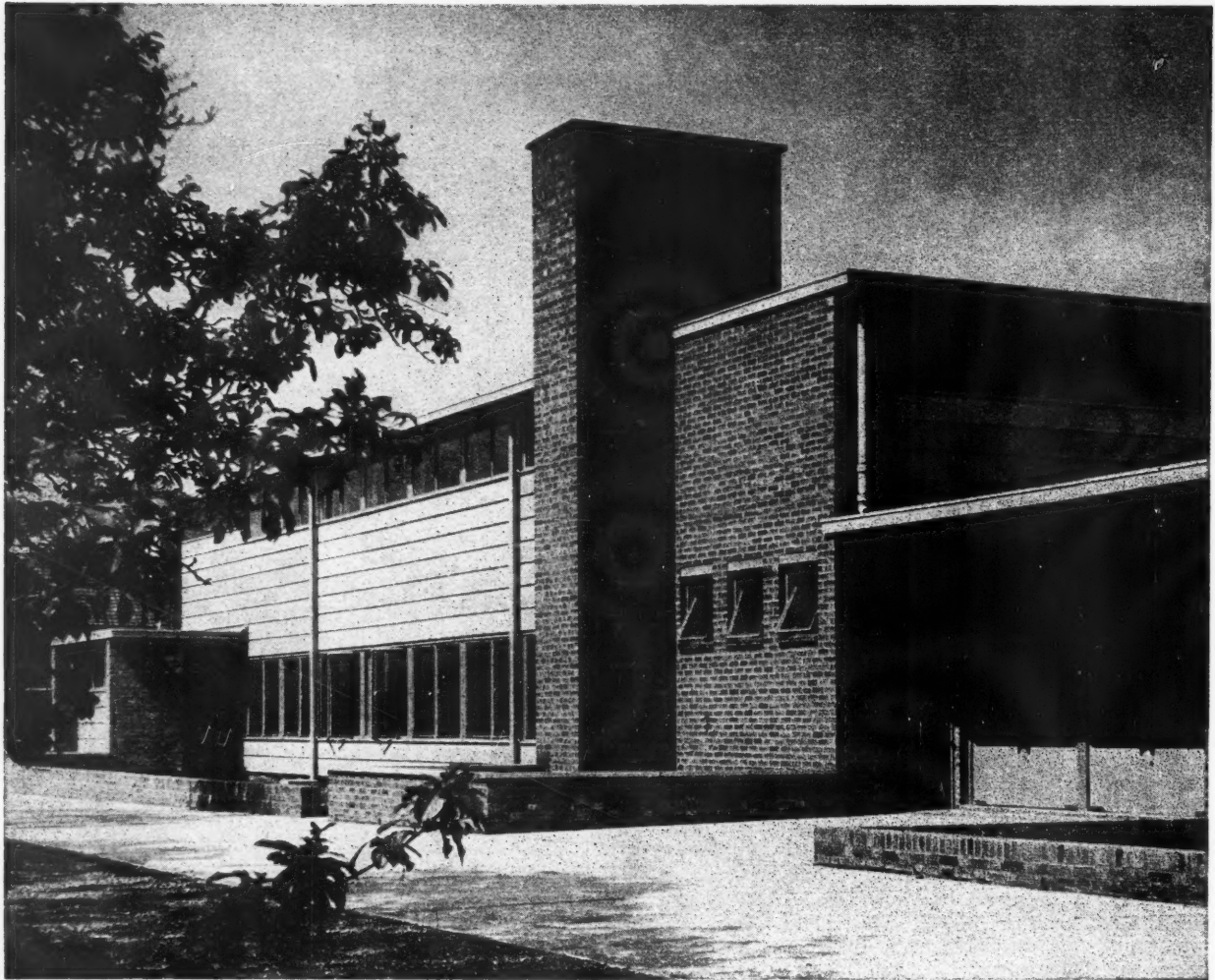
Cheshunt J.M. and I. School, designed by the Hertfordshire County Council Architects' Department. The model demonstrates well the flexibility of the prefabricated mass-produced components used, even if, in execution, the details of this prototype school are not entirely satisfactory.

strictly comparable with the infants and junior school previously discussed. It is a secondary school, and at the time at which it was built, the budget for a school of this type was by no means so restricted as it is today. Nor were there difficulties with regard to materials. Further, the requirements both of teaching policy and of the schedule of accommodation are different. It may, however, be regarded as an aesthetic prototype, a suggestive forerunner, and in most respects an outstandingly successful one. Another important pre-war example was the school in Sussex designed by the West Sussex County Council Architects' Department, of which Mr. Stillman was then head. This school, particularly in its structure, has undoubtedly exercised a considerable influence on subsequent developments.

In direct line with this pre-war work are the primary schools now being built by the Hertfordshire County Council Architects' Department. The first of these schools to be completed was the prototype at Ches-

hunt. Though, in many respects, crude and tentative, it indicated all sorts of interesting possibilities. That the problem of school design was approached in this case from a technical-economic basis is characteristic of our time. Its danger lies in the too early establishment of norms which may possibly make further progress more difficult. The nature of the solution to the technical-economic problems, however, serves to minimize this danger in ways which will presently appear. In Cheshunt and the other schools erected by the Hertfordshire County Council on the structural system developed by their architects, while, in terms of planning, the teaching space is still the basic element, it is not the basic structural element.

The conception of a school or at least its teaching areas as a series of classrooms plus its attendant corridor tends to lead to a portal frame type of structure largely determined by a typical section. The great disadvantage of the portal is that it can be developed in two directions only. Hertford-



6

two schools at Ipswich by Johns and Slater; economical in structure, well-detailed and finished; the horizontal panels are pre-cast concrete.



7

shire County Council has made use of the idea not fundamentally a new one though new in its application, of a very light stanchion and beam structure capable of being developed in four directions. Beneath the post and the beam umbrella, which is designed on a modular basis, the planning can retain a remarkable degree of freedom.

The stanchions of light welded steel have been standardized in three lengths, the longer two can receive beams from the shorter ones on any of their four sides, thus enabling variations in ceiling heights, and consequently spatial relations, to be achieved relatively easily. An examination of the plans of a number of schools designed to make use of this system reveals its flexibility. The recently completed schools at Cheshunt, illustrated on another page of the REVIEW, and Letchworth show two widely differing variations on this theme. Such flexibility does not of course in itself guarantee a satisfactory design, but it makes it more possible within the limits of a large and standardized programme. As might be expected, the use of the grid and module system tends to give a unity to the whole group of buildings. It may be said that the brick forms a module of whatever design is based upon it, but as a unit in design it is so small that the relationship is scarcely perceptible. The Hertfordshire County Council's structural system forms the framework within which the whole accommodation is planned, giving a regular rhythm to elements of the buildings. At the same time partitions can be placed at any angle to the grid-lines.

The interior of the school at Letchworth demonstrates the characteristic lightness of the open beams, with freely flowing space around the columns. The opening out of the corridors, lobbies and cloakroom, ceiled at a lower level communicating with the more important areas such as dining space and hall is characteristic. Where planning has required groups of teaching spaces in a row, the large window areas are alternated with areas of solid wall enclosing heating units and storage spaces. The pattern of the glazing bars of the window, frequently a dominant feature where windows are large in relation to wall surface, is not a combination of uniform rectangles over the whole surface of every window in every wall, but a combination of related rectangles. A different pattern and rhythm emphasizes the different significance and function of the assembly hall. In these schools the primary relations of window to wall, the subdivisions of the large windows, the treatment of the building group as a whole, and the handling of the interior spaces suggest many exciting possibilities. The treatment of the wall surfaces themselves remains an obstinately unsolved problem. Certainly the use of a single material, concrete slabs, for covering the whole wall area assists in unifying the whole building group, but the material itself and the size of the units lack scale and good surface finish. It is remarkable that, although the re-discovery of concrete was one of the most important events in the development of a contemporary architecture, the material remains aesthetically refractory. The slabs used in the Hertfordshire schools are not pleasant in appear-

ance, and neither when used horizontally, as originally (Cheshunt) or vertically (Letchworth) is the scale really good. Some form of textural relief also is desirable. The two schools at Ipswich, designed by Johns and Slater with Birkin Haward, also makes use of concrete slabs, but with a much pleasanter surface and the whole wall surface is better, though this may be the result of better workmanship. The Ipswich schools use brickwork in some of the walls and the value of this change in the cladding unit in humanizing the building is immediately apparent. The Hertfordshire architects are well aware of the same unsatisfactory features in their present cladding. In a study published in *The Architects' Journal* for October 16, 1947, they state, 'There are, however, inconsistencies resulting from present-day conditions such as the necessity of cladding a very light frame with a clumsy intractable material which is neither a panel nor a wall permitting a clear expression of the structure.' The clumsiness of the material is seen in some of the detailing. In later examples the overhang of the roof in the Cheshunt school has been omitted as a result of economic necessity, and treatment at the eaves has not worked out well. The latest schools, I understand, have now had the eaves restored in a different form. The hoods to the entrances also are very coarse. Though those details are apparently minor points and not such as an Education Committee would get excited about, they are extremely relevant in the discussion of the aesthetics of design. The danger, of course, lies in the temptation, when dealing with a programme based in serial production, to stop developing new and more adequate solutions when a workable and not too objectionable answer is found. It is not for a moment suggested that the Hertfordshire County Council's architects are not aware of the difficulties and will not overcome them, but they exist, and in the hands of a less conscientious authority might be fatal to further development.

Before leaving the discussion of the junior schools reference should be made to the bold and extraordinarily successful use of colour in the Hertfordshire schools. Gone are the sombre brown and dark green dado of tradition with their black line along the top. Here are colours direct from the palette which open up a whole new field of possibilities and give a most refreshing atmosphere, particularly in the corridors and lobbies, usually so gloomy and depressing. Some colour photographs to whet your appetite will be found on another page of the REVIEW.

The schools so far discussed in detail have both been based on a system of standardization, which is indeed almost inescapable when dealing with large programmes. There is another method of school building, however, which is still in its infancy, and of which, as yet, no complete example has been constructed—the prefabricated school.* There is, however, a prefabricated classroom unit designed by Richard Sheppard now available (and also one by Arcon), and extensions to existing schools have been constructed making

* Temporary schools are for obvious reasons excluded.

use of these classrooms. In this example the system shows to its full advantage. The corridor side gives particularly pleasant divisions to the surfaces (they cannot properly be called walls), and the airy precision of the detailing exploits admirably the possibilities of the material. Whether larger groups of prefabricated classrooms would enjoy the same felicity is doubtful. The low-pitched roof gives the series a coherent form, and points the difficulty that frequently arises in designing buildings of considerable length with a flat roof. For unless there is a projection of the roof slab or some other obvious termination to the rhythm of the vertical design elements, the building is apt to have a somewhat unfinished look. The prefabrication of schools raises the same doubts as those arising from the prefabrication of houses. Is not the classroom too large a unit to use for this purpose? From the design point of view even the shape of the classroom needs to vary in accordance with the nature of the site or full advantage of the landscape and aspect cannot be taken, nor can harmony be achieved. Of course there are many sites, particularly level ones in towns, where such considerations may well not apply. It is, however, an inescapable fact that prefabricated solutions such as these have fundamental theoretical defects when transferred to a particular site. Later in this discussion some reference will be made to possible developments in prefabrication which would help to overcome these difficulties.

To turn for a moment to secondary schools, there is as yet little opportunity of forming an estimate of the aesthetic developments of this category of building. Few have as yet been built and few projects have so far been published. The first of the schools to be completed is the Bourne Secondary Modern School, again designed by Mr. Lobb. A notable change in the approach to secondary schools is the large number now being designed with single storey classroom blocks. It is frequently stated that this change is due to the revision of daylighting standards. This view is denied by many authorities who are satisfied that multi-storey blocks are possible with adequate daylighting without involving excessive costs. This is a matter of some importance in the design of secondary schools as they are in general likely to be considerably larger than the junior schools. The fantastic extent of the comprehensive secondary school for nine hundred pupils to be built at Pinner, and designed by the Middlesex County Council Architects' Department, shows the effects of the view that the required daylighting can only be achieved economically through single storey buildings. It is arguable whether it is desirable to have schools at all of such size, but this discussion is outside the scope of this article. The single storey secondary schools bear, as might be expected, a family resemblance to the junior schools.

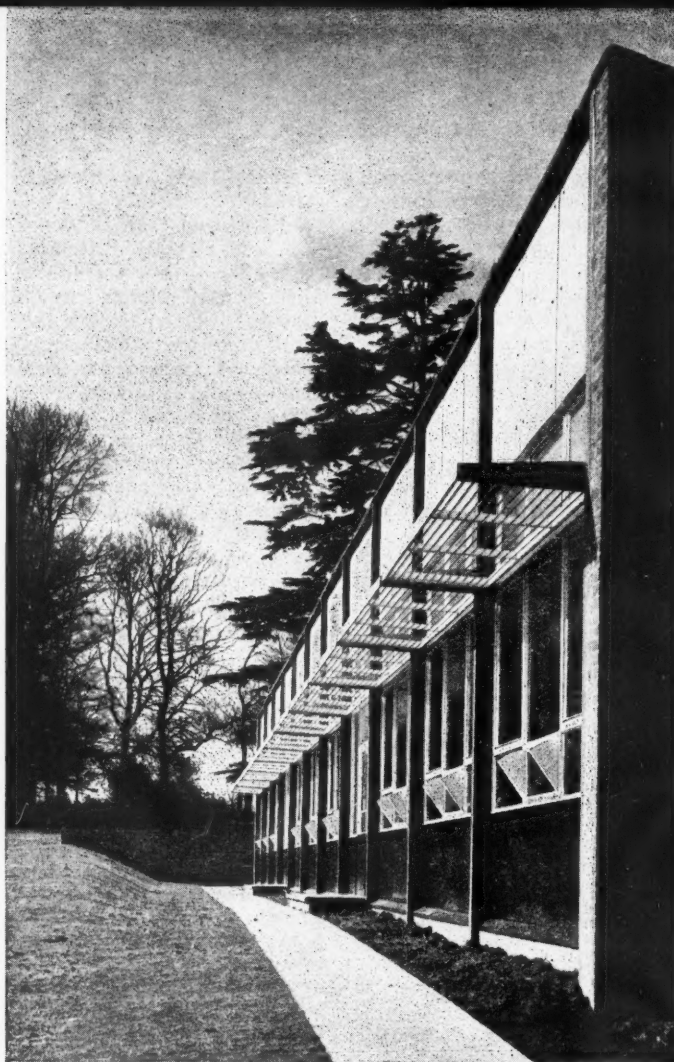
A more significant contemporary approach is to be seen in the Secondary School designed by Yorke, Rosenberg and Mardall at Stevenage. This is a two-storey school and the problem of daylighting in the ground floor classrooms is solved by pro-

viding light wells on the first floor which allow the provision of skylights for the cloakrooms and clerestory lighting for the ground floor classrooms. The classrooms on the first floor are connected to their cloakrooms by bridges. The classroom block is flanked symmetrically on one side by craft and science rooms and on the other by staff rooms, a discussion room and the library. The school also includes community centres for adults and youths. By placing their entrance to these units in an internal corner the architects have sacrificed an opportunity for vigorous expression of the part such buildings can play on the life of the community.* The architectural treatment is simple and straightforward, one is almost tempted to say conventional, that is to the manner of modern architecture in the late thirties. The walling generally is faced with concrete slabs, though some relief is provided by windowless, flanking brick walls.

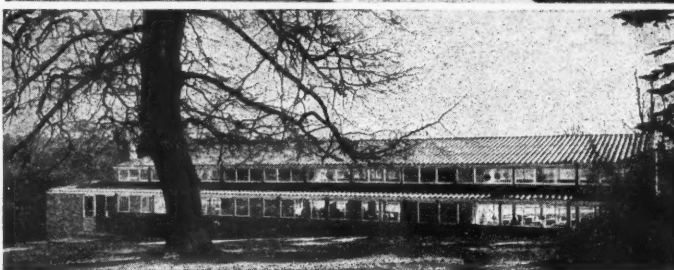
In view of the small number of completed secondary schools it is difficult to generalize upon the aesthetic tendencies they show. It can at least be said that the need for economy and an improvement in the accommodation and programme requirements has put a brake on much of the unnecessary grandeur which was a feature of secondary schools between the wars. Also, since the architectural offices of local Education Authorities and County Architects' Departments are more and more undertaking the design of both junior and secondary schools, a growing family likeness between the two types can be expected.

What conclusions, if any, can be drawn from this necessarily brief examination? It may be said that the idea of 'modern' design has permeated almost all local authorities, and they are showing themselves more willing to accept architectural solutions that might have been rejected fifteen years ago. On the other hand architects are inhibited and at times apparently paralysed by the conditions of the programme. Exercise of imagination is at a discount and the most obvious solution is adopted and standardized forms of expression are well-nigh universal; partly, it must be said, because of the speed at which the designing work must be accomplished. New techniques are being tried out, but too frequently, as is perhaps inevitable, the technique is regarded as primary. The design and form of the building, even its planning, are apt to be considered as details to be worked out when a satisfactory structural system has been achieved. Work is, however, being carried in many directions with interesting results, and, if design and structure are regarded as of equal importance, a too early crystallization of the technical solution may be avoided. At the same time it is surprising that there have not been further experiments in new techniques, apart from those by the Hertfordshire County Council and

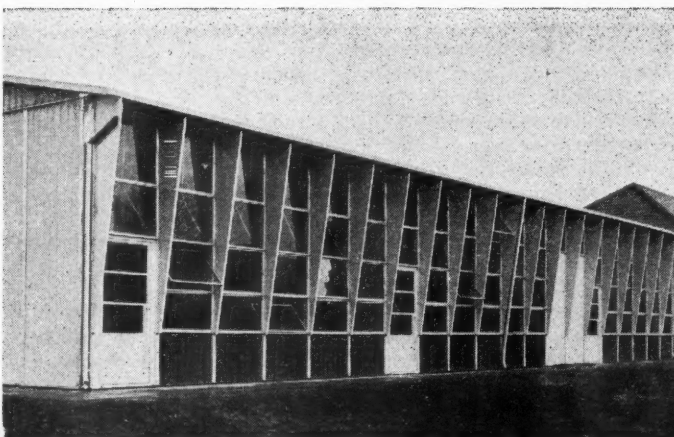
* An interesting comparison is afforded by the design for a school of similar size, though with reduced accommodation for extra-school activities, by Fairweather and Jordan for the Essex County Council. Here a magnificent glazed hall gives access at one end to the school, and at the other to the hall and adult education accommodation.



8



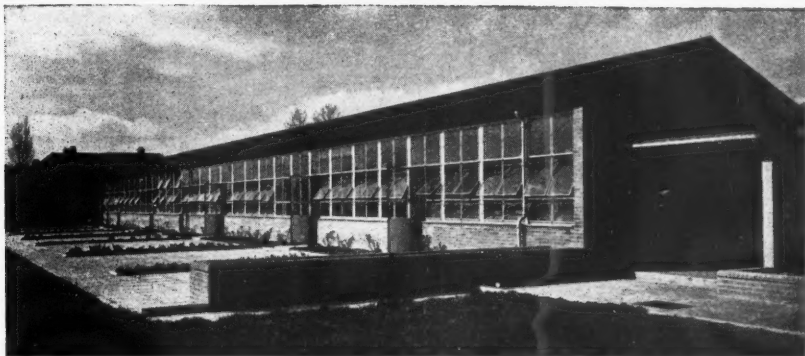
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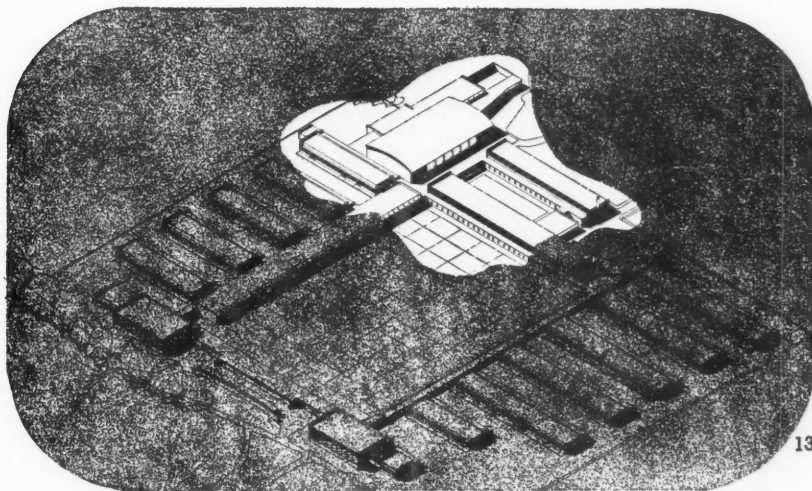
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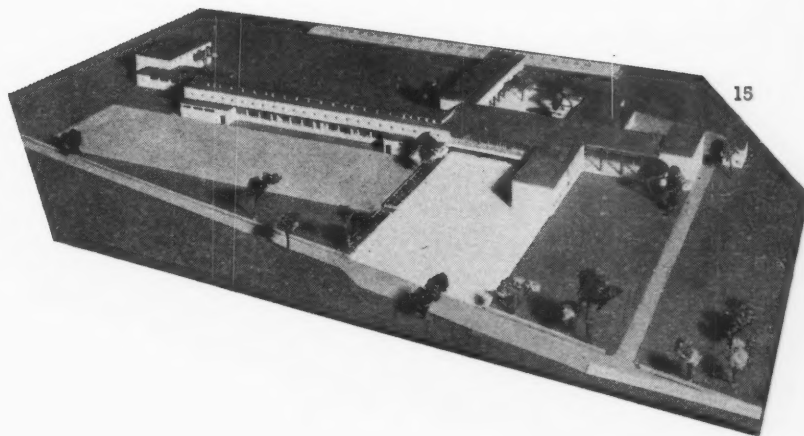


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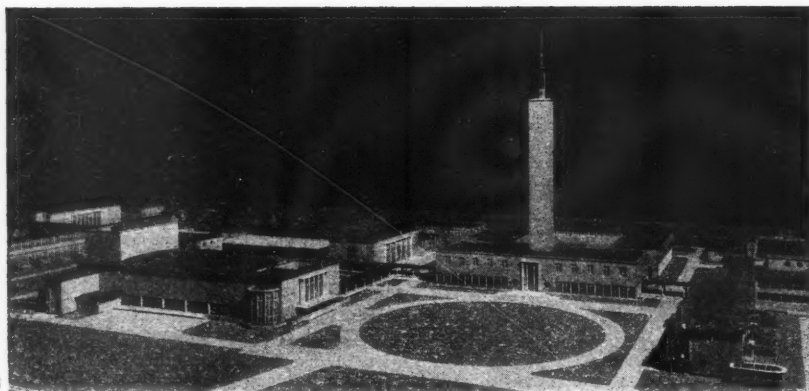
8, 9, facing page, prefabricated aluminium classroom units in a school at Hatfield, Hertfordshire, designed by Arcon. The rigidity and uniformity of the unit makes it unsuitable for extended rows of classrooms. Facing page, 10, classroom side, and 11, corridor elevation, of prefabricated classrooms designed by Sheppard and Shuffelbottom. The lightness in feeling is very pleasant when the block is kept to a reasonable size. 12, Bourne Modern Secondary School by Howard V. Lobb. This is similar in construction and detail to the same architect's Field End Primary School (no. 1, page 154). 13, project for a comprehensive secondary school; the fantastic extension of a single-storey system reveals one of the weaknesses of this approach to large schools. 14, entrance to Walkern Road Secondary Modern School at Stevenage, Hertfordshire, by F. R. S. Yorke, E. Rosenberg and C. S. Mardall (see pages 169-176). 15, model for a secondary school at Rainham, Essex, by Fairweather & Jordan; the large two-storey entrance to one side of the projecting wing in the foreground is an admirable introduction to school and adult education facilities.



14



15



16

16, this assertive design for a secondary school and community centre has achieved exactly that pompous, institutional effect which is so inappropriate as an environment for children. 17 is a legacy of the past. Unfortunately, too many schools of this type still exist, unsuitable either for teachers or pupils, but, perhaps, serving to show, in spite of the criticisms put forward in this article, the measure of the advances that have been made during the last twenty years.

the prefabricated classroom units. This may well be due to the urgency of the operational programme through which the desire to get something built often impedes the further development of a good idea. It is certain that sooner or later pre-stressed concrete will be used for schools. Although this will certainly open up further possibilities in design, at present the tendency is to use this material as a substitute for others more difficult to obtain, without departing from conventional design formulae.

It was suggested above that the complete prefabricated classroom is not the only, or even the most desirable, direction in which factory production may come to the aid of the school designer. The development of a system of modular standardiza-

tion, panels of varying heights adapted for different purposes, solid walls, windows, doors, and so on capable of combination, not merely on one level, would go far towards eliminating the dreariness of many classroom blocks, of which the individual units may often be well designed. There is little doubt that on the whole those schools that have the classrooms expressed as individual units or in pairs are more satisfactory than the long row.

Two other related problems are worth brief attention. These are the design of schools, particularly the larger ones, in grouped, but separate, building units. There are, of course, pitfalls here, as the published design for a multilateral secondary school at East Ham makes clear. A school should be a school and not a junior

civic centre. The second problem is the removal of the institutional atmosphere from the school. Educationalists are today more aware of the child's needs than before. Advances in the study of child psychology are leading to the rejection of the idea of indoctrination and 'memory tests' as a substitute for development and understanding. To get the best results from the school years it is important that the environment should be adjusted to the needs of the child. However, it simplifies the problem of the architect or Education Committee to regard pupils as so many undifferentiated units. The adoption of this attitude in the past has not helped to develop happily balanced personalities. It is precisely this lack of differentiation that underlies the institutional character of many schools. In general it will be evident that the bigger the organization the harder it is to avoid the institution, and the more a school becomes an institution in this sense, the less effective it will be as an instrument of education. In his approach to school design the architect has a two-fold problem. He has to design a building or group of buildings to house numbers of people, none of whom is alike, and he has to remember all the time that he is designing for children. The latter point requires an even greater exercise of imagination than the former. Many schools today seem to be designed in the sequence *method of construction and materials—numbers—site*. A valid new architecture must require an order more as follows, *children—site—building—methods of realization*. There are, fortunately, many indications of an advance in this direction.



17

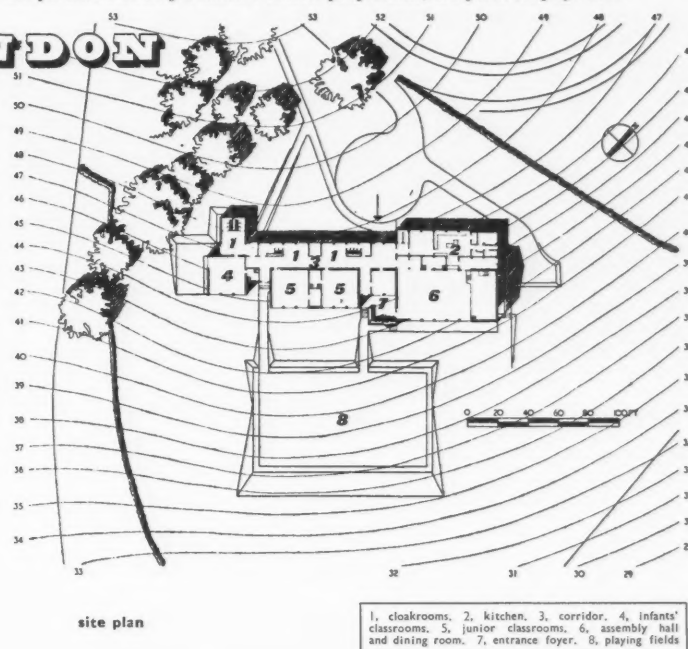
Four buildings, recently completed as part of the schools programme of the Hertfordshire County Council, are illustrated on this and the following pages. Three of them, junior mixed and infants' schools, were designed by the County Architect's Department* to a structural system which is being employed for all the schools designed in this office. The fourth, a secondary modern school, is the work of a private firm of architects. It is no exaggeration to say that the attention given to every detail of the planning, structure and finishes of these schools, to the adventurous spirit in which the whole problem has been tackled, makes them an outstanding contribution to post-war building.

*The names of the staff of the County Architect's Department, working on the Hertfordshire County Council's schools programme, are given on page 137.

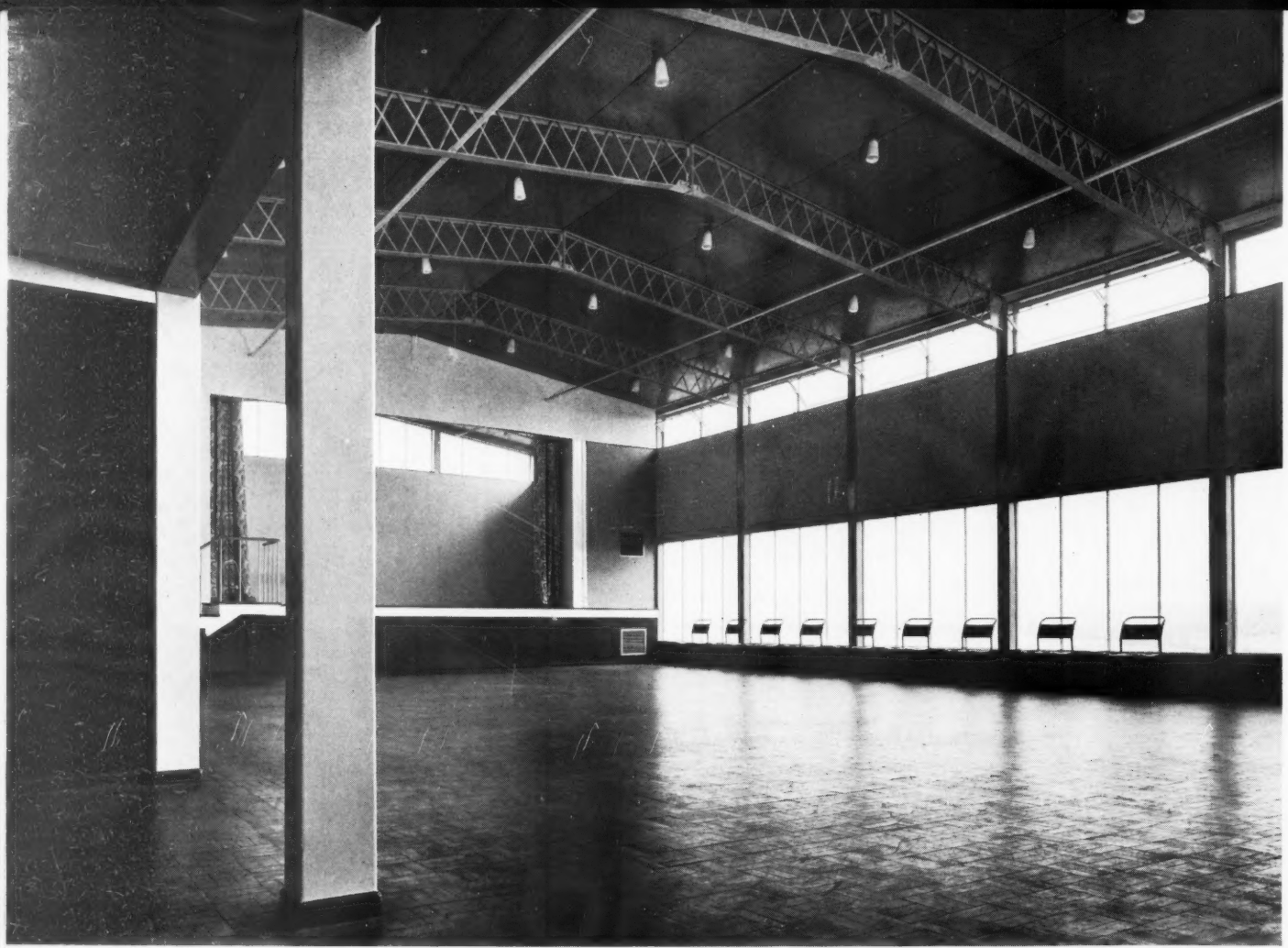
SCHOOL AT ESSENDON

HERTFORDSHIRE COUNTY ARCHITECT'S DEPARTMENT: ARCHITECTS

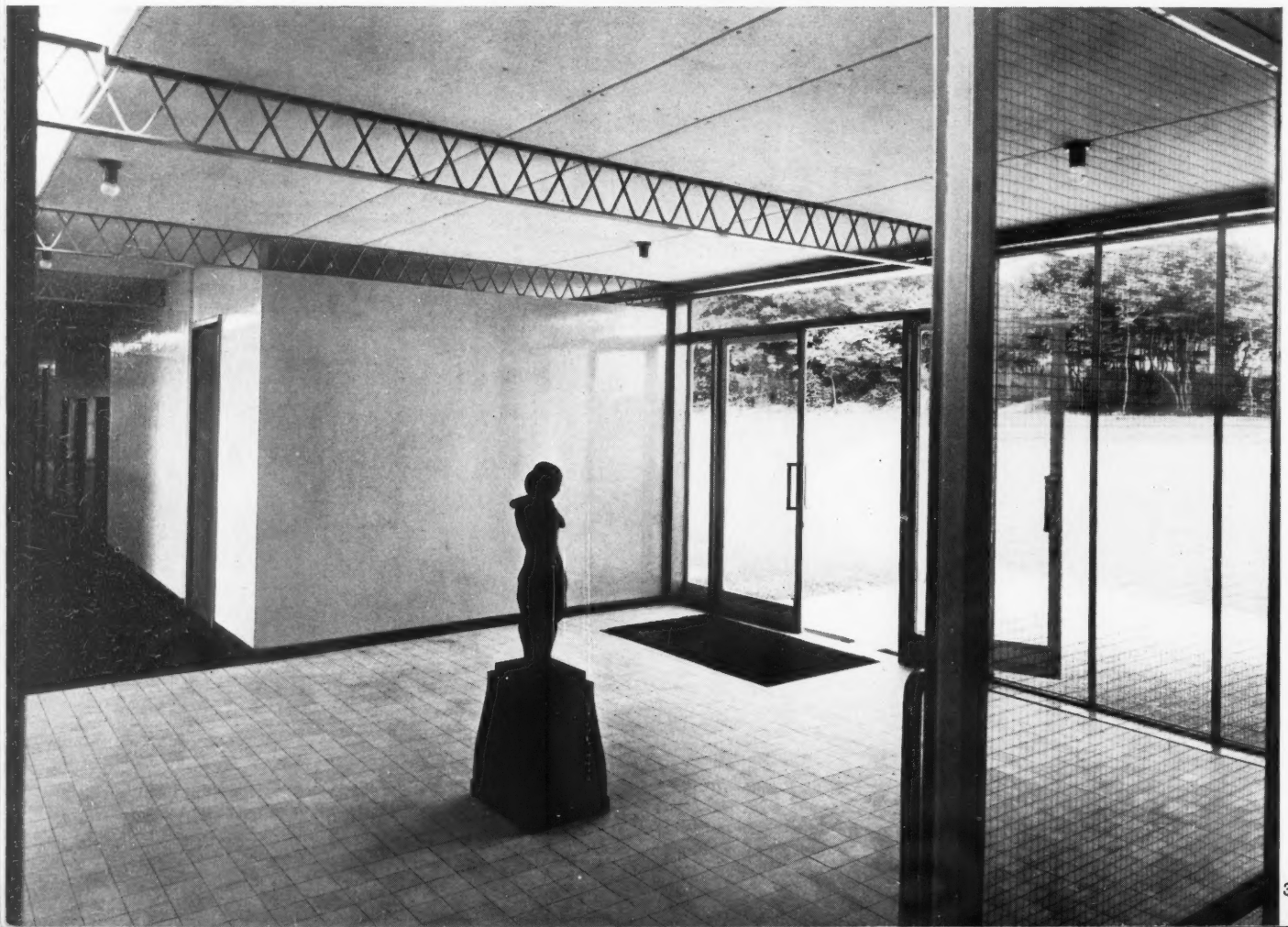
This Junior Mixed and Infants' School is the first village school in Hertfordshire built in accordance with the standards of the 1944 Education Act. Essendon lacked an adequate social centre, and the assembly hall is planned as a suitable meeting place for village organisations as well as for school purposes. The site is wooded, with splendid views; existing trees and shrubs are retained to form a natural playground for the infants. The construction relies mainly on a light steel frame, designed as a series of component parts capable of mass production and easy assembly; maximum flexibility in design is possible. Precast concrete blocks and fibrous plaster cover the frame. This basic method is standard throughout the County Council's school building programme, and experience gained in the erection of one school is used to improve others, especially in details. The use of colour and the design and placing of windows and fittings are carefully considered from the point of view of children's needs.



assembly hall and dining room, with the junior classroom block on the left, and the connecting entrance foyer; a view from the playing fields at the south-east of the site.

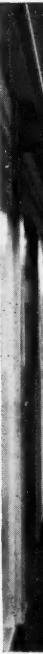


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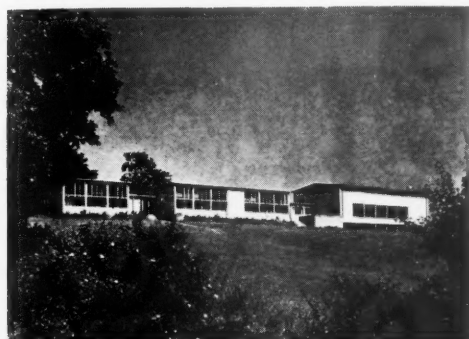
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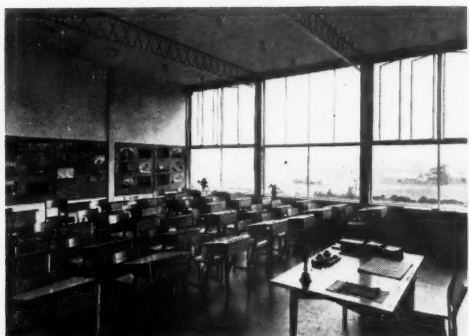


SCHOOL AT ESSENDON

facing page, 2, assembly hall and dining room; the stage is at the north-eastern end. 3, entrance foyer, with glass doors and windows on to the drive. 4, east elevation of the school seen across the playing fields. 5, a junior classroom. 6, corridor with cloakrooms on the right and classrooms on the left.



4



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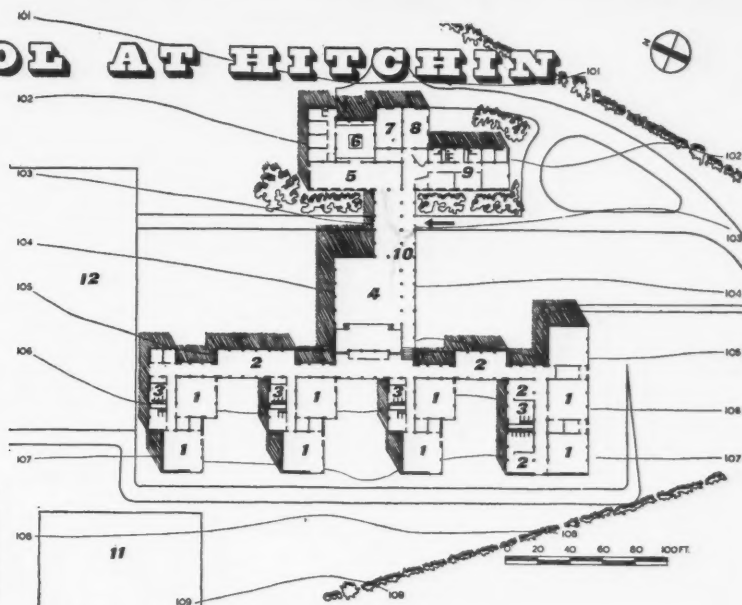


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SCHOOL AT HITCHIN

1, classrooms. 2, cloakrooms.
3, toilets. 4, assembly hall.
5, dining room. 6, kitchen.
7, boiler house. 8, staff room.
9, medical rooms. 10, corridor.
11, playing field. 12, games pitch.

site plan

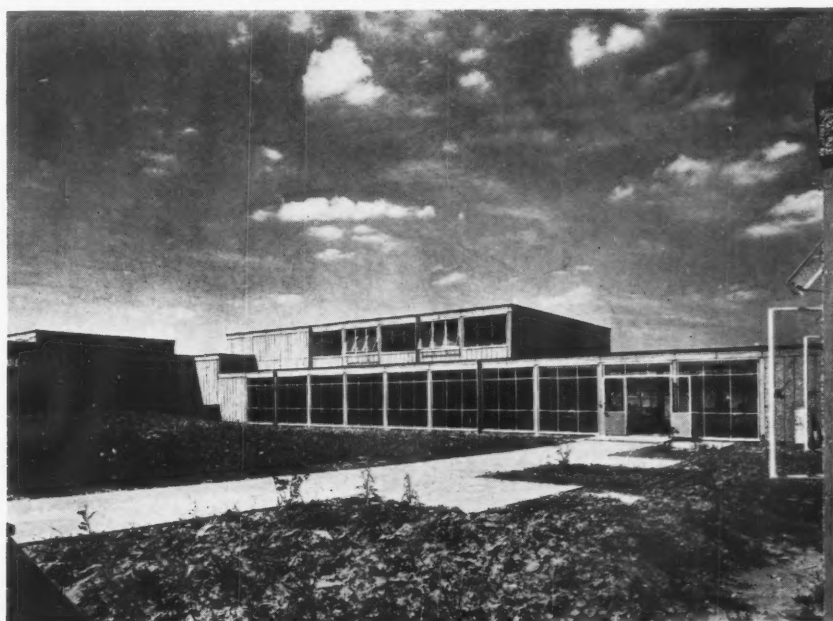


HERTFORDSHIRE COUNTY ARCHITECT'S

DEPARTMENT: ARCHITECTS

Built by the Hertfordshire County Council shortly after the Essendon school, and constructed with a similar use of assembled steel frame components with precast concrete and fibrous plaster covering units, this infants' school incorporates modifications of the prototype designs. Notably these are in the improved type wall cladding blocks, and in the substitution of a flat roof for a pitched roof over the assembly hall. The relatively flat site is at the edge of an architecturally dull pre-war housing development area. An open plan ensures a S.S.E. aspect for all classrooms and enables the best possible use to be made of the varying levels. The classrooms are arranged in groups of two and three, each with its own lavatories and cloakrooms; paved courts between pairs of classrooms minimise sound interference and provide outdoor teaching space. Away from the road is a large asphalted playground, with a brick wall for ball games, a sandpit and paddling pools. Colour is again employed throughout and is chosen according to the activity envisaged in various rooms.

1, assembly hall, seen across the courtyard from the east. The medical rooms are to the right, with the connecting main entrance, and the cloakrooms of the classroom block are at the left.



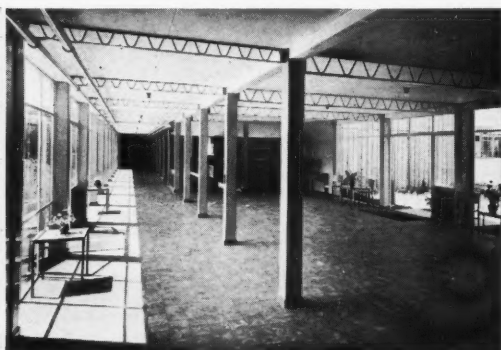
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SCHOOL AT HITCHIN



2

2, a classroom wing. 3, assembly hall and stage. 4, entrance hall, looking east to assembly hall, 5, north-south corridor, with stairway to entrance hall; cloakrooms are on the left and classrooms on the right.



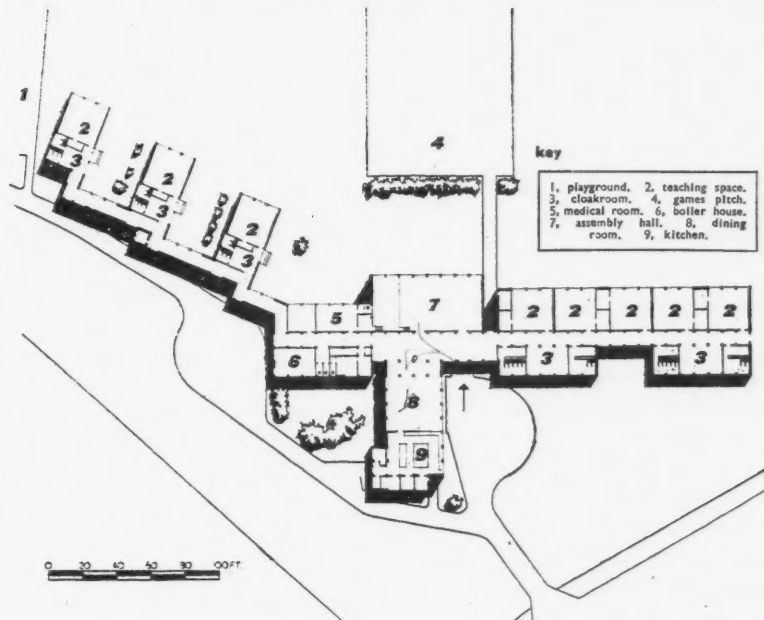
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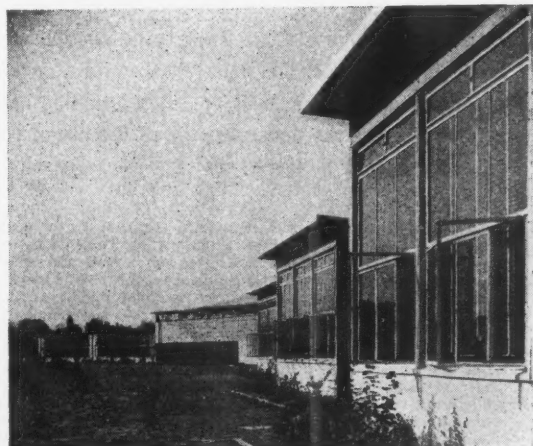


SCHOOL AT CHESHUNT

HERTFORDSHIRE COUNTY ARCHITECT'S DEPARTMENT: ARCHITECTS



Designed in accordance with the standards laid down by the 1944 Education Act, this Junior Mixed and Infants' school was the first to be completed as part of the county's post-war school building programme and it serves as prototype for all current work. The site is flat, with a southern aspect across the playing fields; planting and landscaping, with provision of shrubs and trees, were carried out as part of the main contract. Bright clear colours have been used imaginatively in the interior and these are illustrated on pages 167 and 168. Lack of traditional building material, the shortage of labour, and the opportunities offered by the new standards for schools, determined the new building methods employed. In this school the principle of using a light steel frame, mass-produced in sections and



south elevation, showing classroom blocks.



doorway to outdoor teaching space.

assembled on the site, was first put into practice, and it has since been developed and improved in other schools built later. The structural system and first design projects for this school and that at Essendon were described fully in *THE REVIEW* for February, 1947.

COLOUR IN SCHOOLS

The schools built by the Hertfordshire County Council are not individual projects carried out by individual architects, but are designed on a group basis. A high degree of component standardization is involved—standardization of means, not ends. This method of working makes it necessary to evolve a rationale for the use of colour that can be appreciated by all members of the group and not by merely one or two, and these notes summarise this rationale.

One can assume that there are three main approaches to the use of colour in building :—

- a *Decorative*: unimportant details are usually exaggerated. It would be mistaken to condemn this approach outright, but it cannot be considered a rational one.
- b *Camouflage*: colour is used to change the existing conditions (for instance, lightening a dark space or simplifying a complicated space); a process most often necessary in treating existing buildings.
- c *Organic*: colour and form are considered as inseparable. All surfaces are subject to certain natural and functional conditions, such as the degree of daylight falling upon them, and the functions for which they provide a background. Because colour must be related to these conditions, the architect must realise that, at early sketch design stage, he is determining the nature of the colour. If this relationship is not maintained, and colour does not 'speak the truth,' it will not be a clear expression of the architect's original intention, and will probably rely to much on either a decorative or a camouflage approach.

The following procedure for analysis of the building gave a guide to the appropriate use of colour:—

- 1 *The aesthetics of the structure*: different structural methods present different visual patterns, which should be clearly expressed by colour. The frame construction used for the schools gives a visual pattern of beams and columns with panels inserted between them. This aesthetic is one that imposes a natural discipline to the interior, and its recognition by the colour treatment will prevent a conflict between the two. The structural members have been consistently painted a pale grey throughout the schools in order to avoid an inappropriately decorative treatment, while the panels receive colours appropriate to the spaces they enclose.
- 2 *Light and shade*: the architect, by his arrangement of windows, can create a conscious pattern of light and shade in the interior. This pattern should vary according to the use of space; therefore, when colour is applied, it should conform and not conflict with the original conception. There can be a definite relation-

ship between the light reflectivity of the colour (as distinct from hue) and the degree of light falling on the surface. However, a corrective use of colour may often be necessary where sky glare has to be reduced.

- 3 *The children*: the children must determine the character of the colours. With their quick movements, bright coloured clothes, high-pitched voices, they will create a sparkling pattern, whatever they are doing. Also they like, and tend to use, bright primary colours, without a lot of thinking and mixing. In so many schools these qualities fail to be reflected in the use of colour, which so often are dirt-concealing, dull or at best sophisticated.

- 4 *Activities in the building*: a primary school can, for convenience, be divided into four kinds of space:

- (a) Entrance halls and circulation areas. Here is constant movement, and children do not stay for any length of time. This suggests that colour can be used boldly, and in the most stimulating schemes.
- (b) Assembly halls and dining rooms. Here there will be considerable activity and movement, with larger groups of children. This suggests a bright and jolly colour treatment, although perhaps rather more dignified than in the entrance or circulation areas. Because the assembly hall is the one common meeting place for the whole school, it is psychologically valuable to create something more than a merely passive background—a character which will catch the imagination on entering.
- (c) Class spaces. Formal teaching is giving place to a wide variety of informal activities, which need a domestic, rather than an institutional, setting.
- (d) Staff rooms, etc. These will be occupied by adults, and a domestic character is appropriate.

This oversimplified statement, which omits many considerations, should suffice to show that there is plenty of opportunity in a primary school for an interesting use of colour, and there is no reason for the dull uniformity which is so common. The limited number of natural materials now available means that the careful use of applied colour is particularly important. There is urgent necessity for research into how a standard system of terminology can be established, and how a small number of basic reliable colours can be selected so that, when intermixed, they can provide a comprehensive colour scale.* These aids should in no way inhibit the designer, but it is felt that they, together with a development of the ideas considered in this article, will help to increase the understanding of the use of colour and its application in building.

D. L. Medd

* The first requirement is to establish a colour scale, the counterpart, so to speak, of the composer's piano, without which he could not compose the simplest tune. After all, the architect relies on a scale and numerous other measuring devices for his working drawings, but the tools he has for colour are as unhelpful as a piano scale with half the notes missing, and those that do exist arranged in the wrong order and out of tune. Manufacturers' standards are necessarily based on sale, and consequently are scientifically and aesthetically arbitrary. Several official bodies publish standard colours, for their own purposes, which only serve to add to the confusion. Architects are probably, of all consumers of paint, the most difficult to satisfy, but at the same time their demands are probably the smallest in quantity. This would seem to make it possible for some authoritative body to establish a standard comprehensive scale, which would serve as a national master scale to which all other selective standards could refer. This would make standard symbolical colour referencing possible, and would end the confusing and overlapping terminology which now exists.



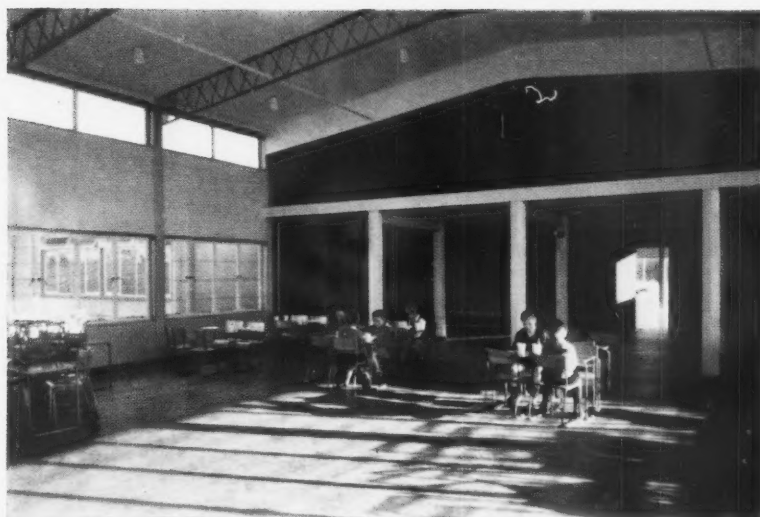


1

COLOUR IN SCHOOLS: CHESHUNT

1, junior mixed and infants' school, Cheshunt, a general view from the south-west. The external colour treatment is restricted by the difficulty of obtaining reliable coloured precast concrete blocks, but a number of experimental fibrous plaster panels, treated with boiled oil and then painted, have been used. The blue panel shown above is an example of this. 2, a view looking across the dining room and the entrance hall through the assembly hall doors, Cheshunt. The blue is Ost. 14 na.* 3, entrance hall, Cheshunt. The dark green is Ost. 20 pg, the yellow Ost. 2 na, and the red Ost. 6 na. The ceiling is white (Ost. a), and structural components grey (Ost. c). (Note the tone of the colour matching the degree of daylight on each surface.) 4, junior mixed and infants' school, Essendon, the entrance hall. The yellow is Ost. 2 na and the red Ost. 6 na. The ceiling is white (Ost. a) and the structural components grey (Ost. c). 5, infants' class space, Essendon. Excepting the panels in the back wall, which are orange (Ost. 5 ca), all walls and the portion below the clerestory window are white. Structural components are grey (Ost. c).

*Although the Ostwald colour references are given, they do not indicate a strong allegiance to that particular system, which was discussed in some detail in five articles in *THE ARCHITECTURAL REVIEW* in 1937 by Ozenfant. Recent evidence is showing that the Munsell system overcomes a number of difficulties inherent in Ostwald.



2



3



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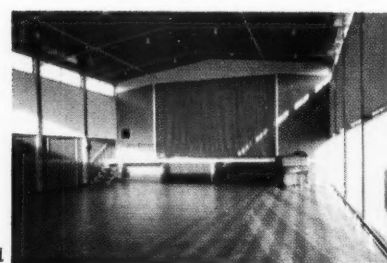
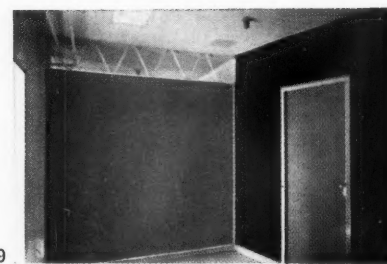
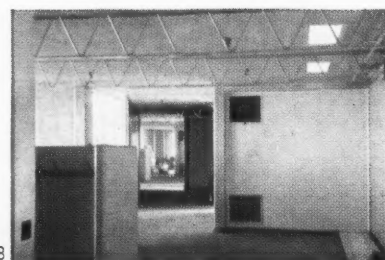


5



COLOUR IN SCHOOLS: CHESHUNT

6, junior mixed and infants' school, Cheshunt. One of three infants' class spaces. The ceiling is white (Ost. a) and the back wall pale blue (Ost. 15 ca); the wall on the right is glossy grey (Ost. 1 ec); the floor is brown linoleum. Pin-up boards are restricted to a height which children can reach, and each alternate rectangle is grey (Ost. n), on which the children can draw. Cupboard doors are painted, glossy finish, orange and yellow (Ost. 5 na and 2 na), blue and turquoise (Ost. 14 na and 17 na), red and orange (Ost. 8 na and 5 na). These pairs are close on the colour scale in order to avoid widely different light reflectivities on each cupboard, which would have disrupted their form. The close harmonies produce a strong vibrant effect which echoes the pattern of activity in the room. Bright colours in small areas at low level emphasise a scale appropriate to young children.



7, junior mixed and infants' school, Cheshunt, infants' cloakroom. All walls are glossy white (Ost. a), except back walls of cloaks fittings, which are glossy red (Ost. 6 ia) and blue (Ost. 18 ia) differentiating between boys and girls. 8, junior mixed and infants' school, Letchworth. Looking down the diagonal circulation space. In this direction transverse walls are yellow (Ost. 2 na). The complicated pattern of walls is simplified by painting parallel planes with the same bright colour. 9, looking in the opposite direction from 8, showing the end of the circulation space with lavatory wall at the right. Here the walls corresponding to the yellow ones are red (Ost. 6 na), 10, junior mixed

and infants' school, Cheshunt, a class space for juniors. The panels in the back wall are a warm colour (Ost. 5 gc). All columns and beams are pale grey (Ost. c), and wall surfaces adjacent to windows are white, to minimise glare through excessive brightness contrasts. 11, assembly hall, Cheshunt. The colour scheme aims at a balance between warm floor (wood blocks) and cold ceiling, with wall treatment on the achromatic scale. Panels next to windows are matt white, except those at ground level, which are glossy dark grey (Ost. 1) serving as a dado. Bright red was chosen for the curtain (a movable fitting) in order to upset the balance of the scheme and provide interest and stimulus.

SCHOOL AT STEVENAGE

F. R. S. YORKE, E. ROSENBERG, G. S. MARDALL: ARCHITECTS

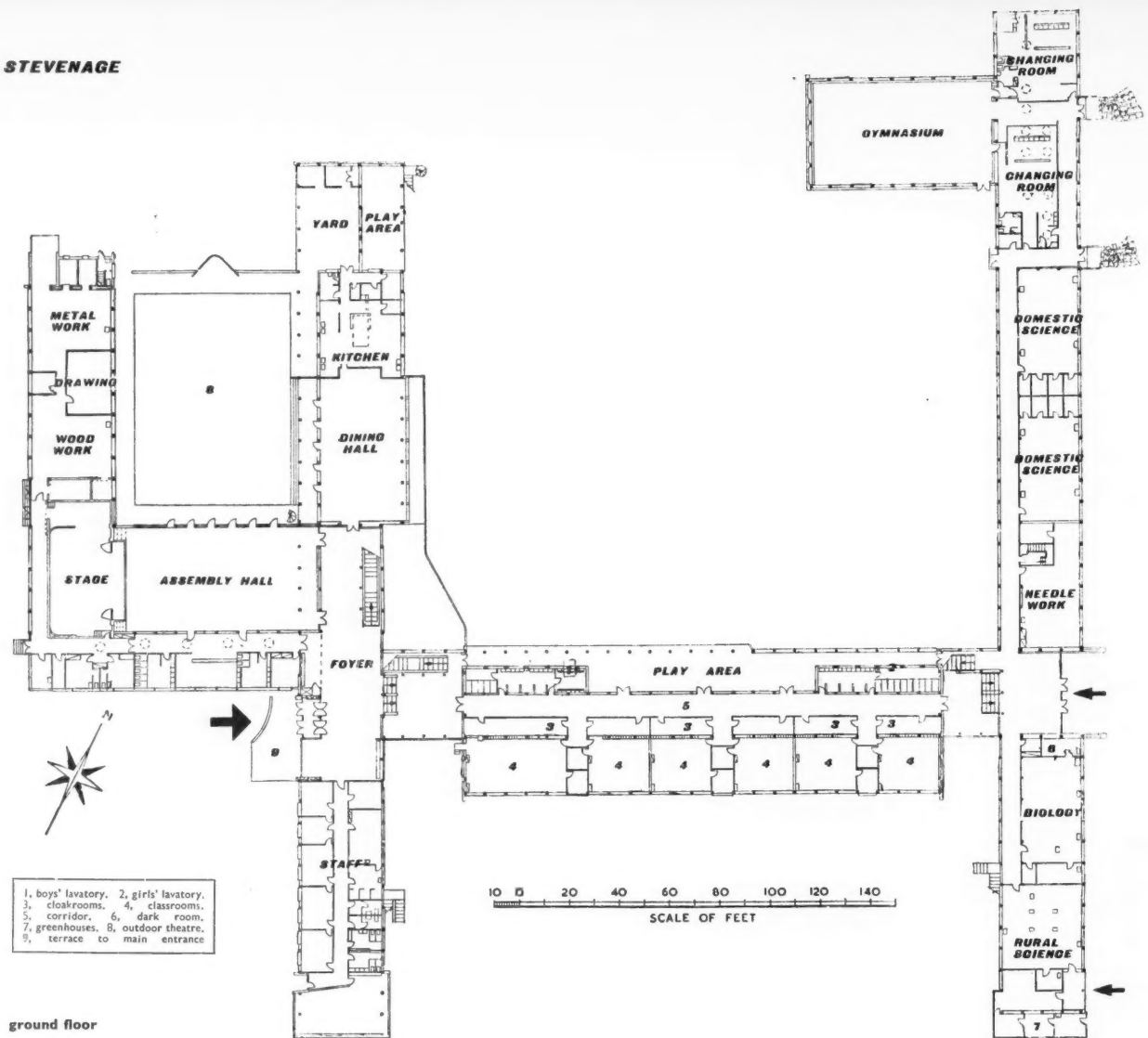
Designed to accommodate 450 children, this mixed secondary modern school also includes community centres for adults and youths. The assembly hall, with its stage, is planned for use both by the school and by the general public, and it seats 500 persons.

the plan is basically H-shaped, with an extension towards the western end of the site. This extension contains the assembly hall, which faces an open quadrangle; the metal work and woodworking rooms



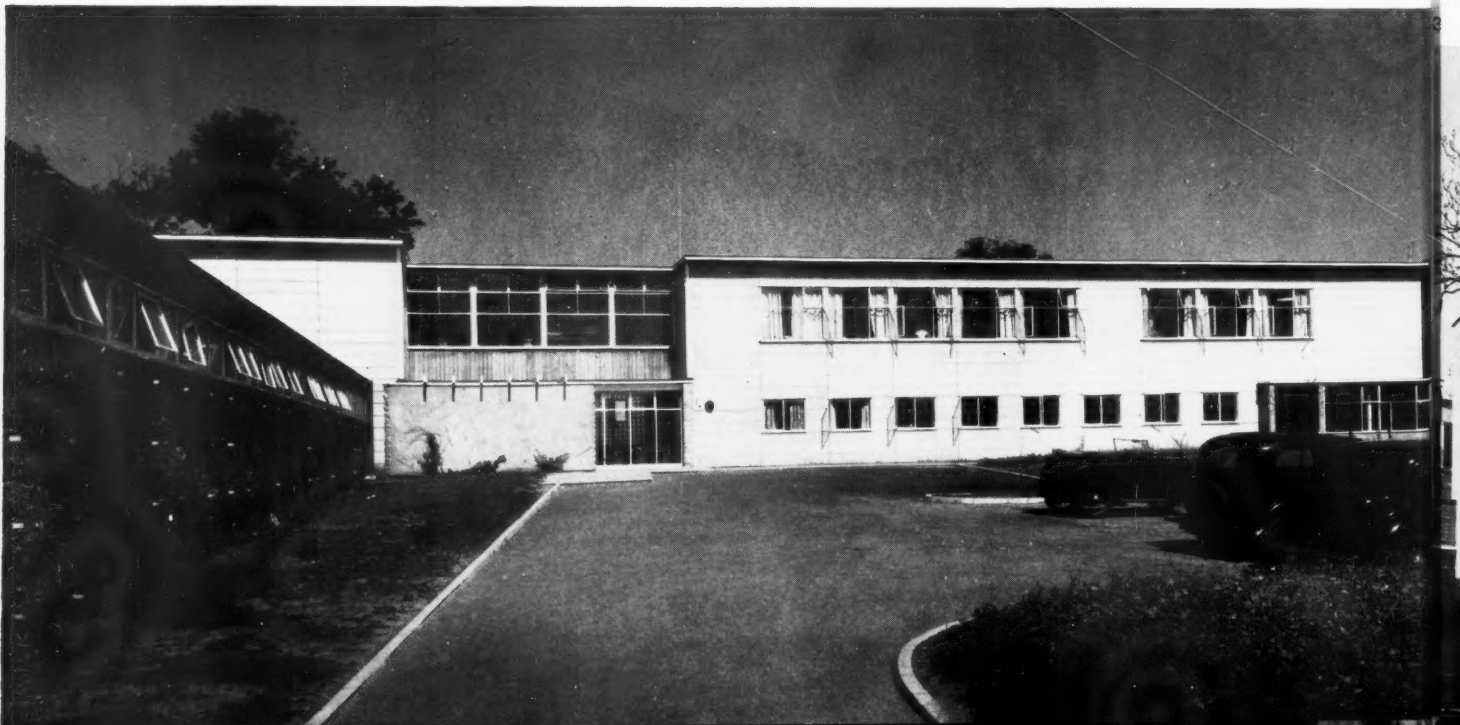
1, staircase in foyer of main entrance looking on to playground.

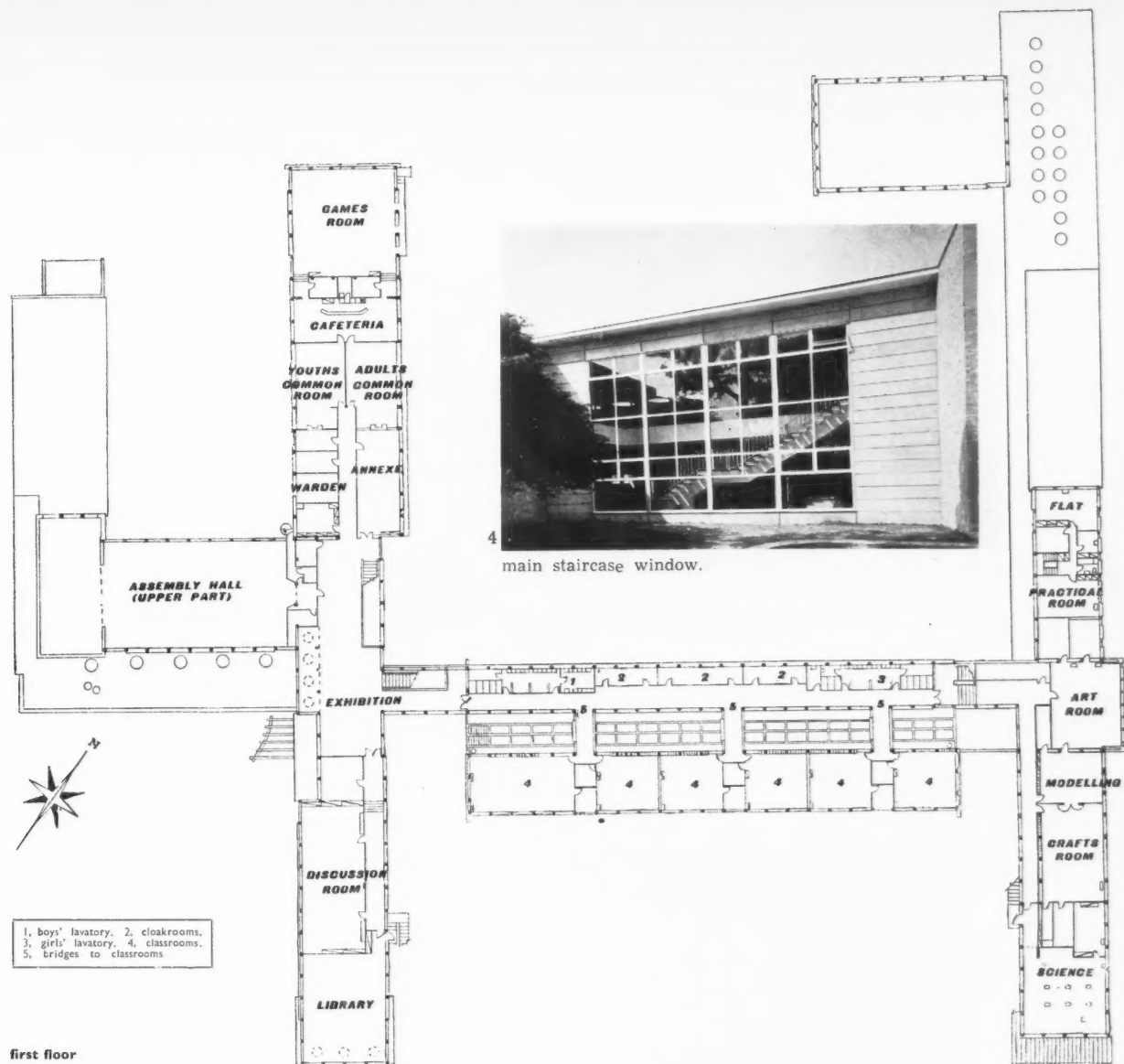
SCHOOL AT STEVENAGE



2, the main entrance. 3, on facing page, the classroom block.

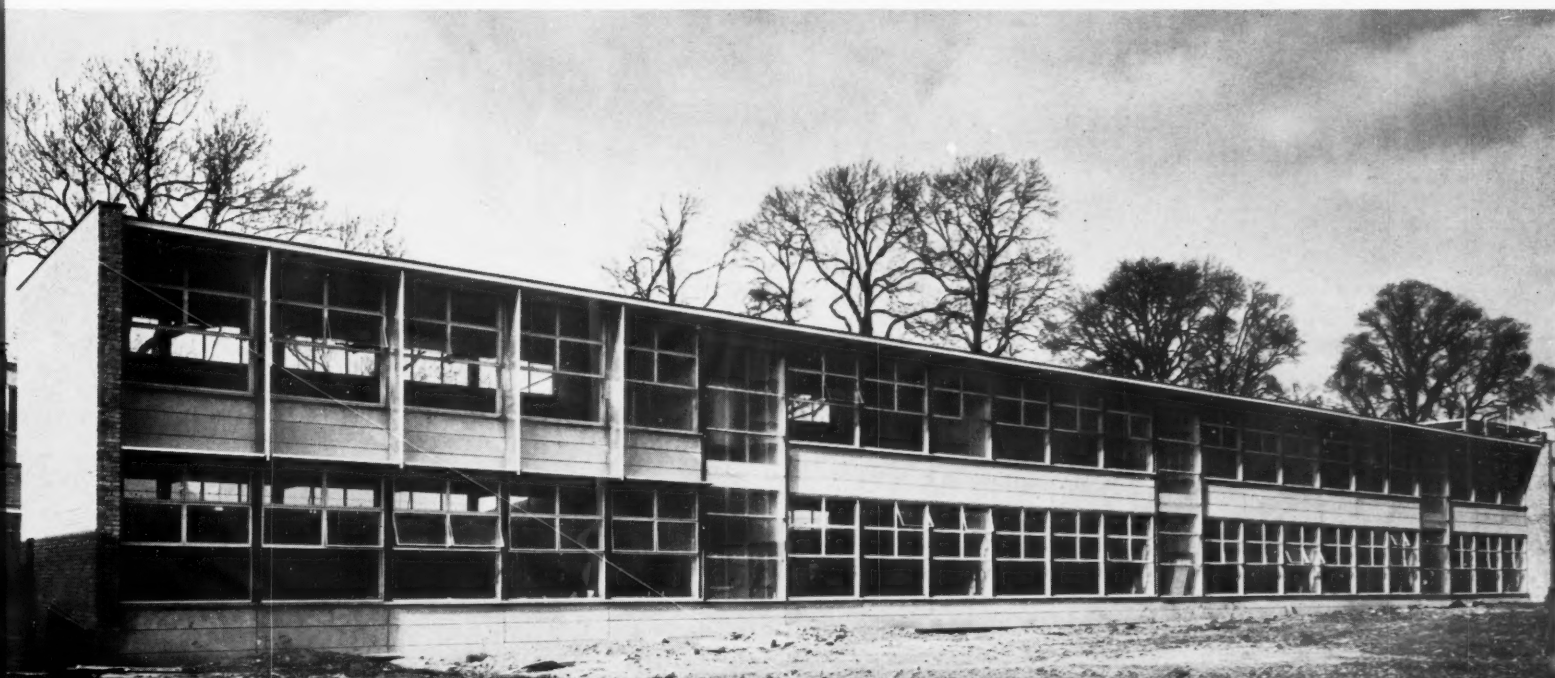
are also included in this part of the building, as they are noisy places and require to be a distance from the main school rooms. The part of the building concerned with community activities is placed next to the main entrance, from which there is direct access to the



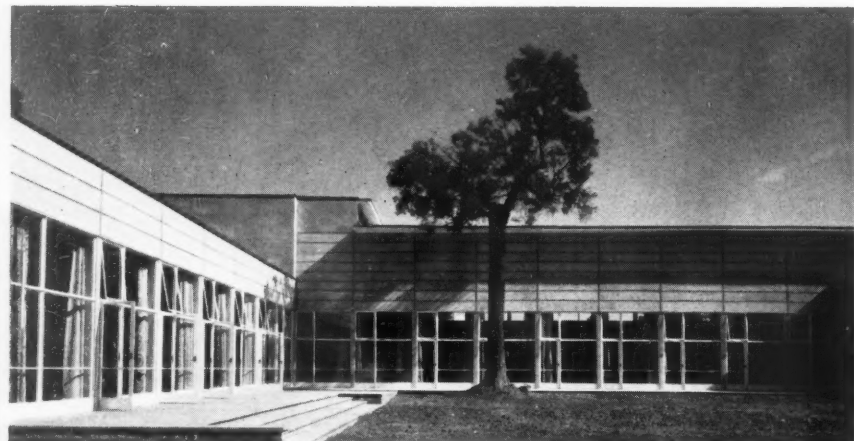


assembly hall. From the entrance foyer a flight of stairs leads to the first floor community centres, which can be approached without intruding into the school itself. On the ground floor below these community centres are the dining hall and kitchens, which also need to

be kept away from classrooms. To the south of the entrance foyer, which is the focal centre of the school, are the ground floor staff rooms, with library and discussion room above. A two-storey block of classrooms forms the crosspiece of the H-plan; the problem of



SCHOOL AT STEVENAGE



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5, dining hall and assembly hall from the north-west. 6, covered play area, cloakrooms and dining room, showing projecting stanchions for the future completion of the adult centre. 7, detail of windows in south-east façade of the classroom block.

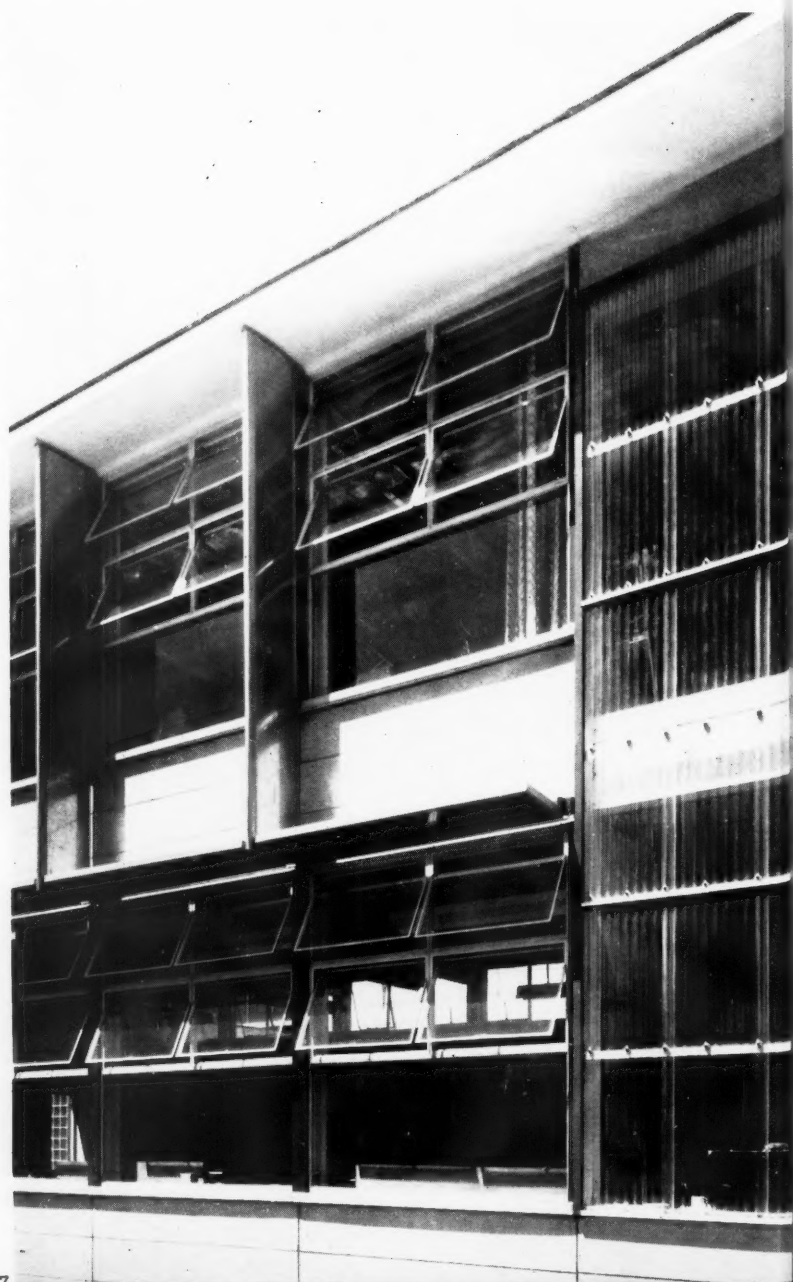
placing lavatories in close proximity to them, while yet retaining adequate ventilation and lighting, is solved by building a two-storey block, parallel and near to the classroom block. The intervening space is roofed at ground floor level, covering a corridor and cloakrooms; three bridges connect the upper floors. The eastern leg of the H-plan contains on the ground floor two of the laboratories and the housecraft rooms; on the first floor are arts and crafts rooms, a practical room, and a flat for teaching housecraft. The gymnasium and changing rooms, which also should be kept separate from the main school buildings, jut out from the northern end of this wing.

construction is steel frame, with components welded into lattice members and galvanised, the framework being planned on a grid of 8 ft. 3 ins. Precast concrete slab is used for constructional flooring and roofs; roof slabs are covered with bituminous material on insulation boarding. Ceilings are wood wool slabs placed below the concrete roofing, ensuring adequate heat and sound insulation. Floors are screeded to contain copper heating

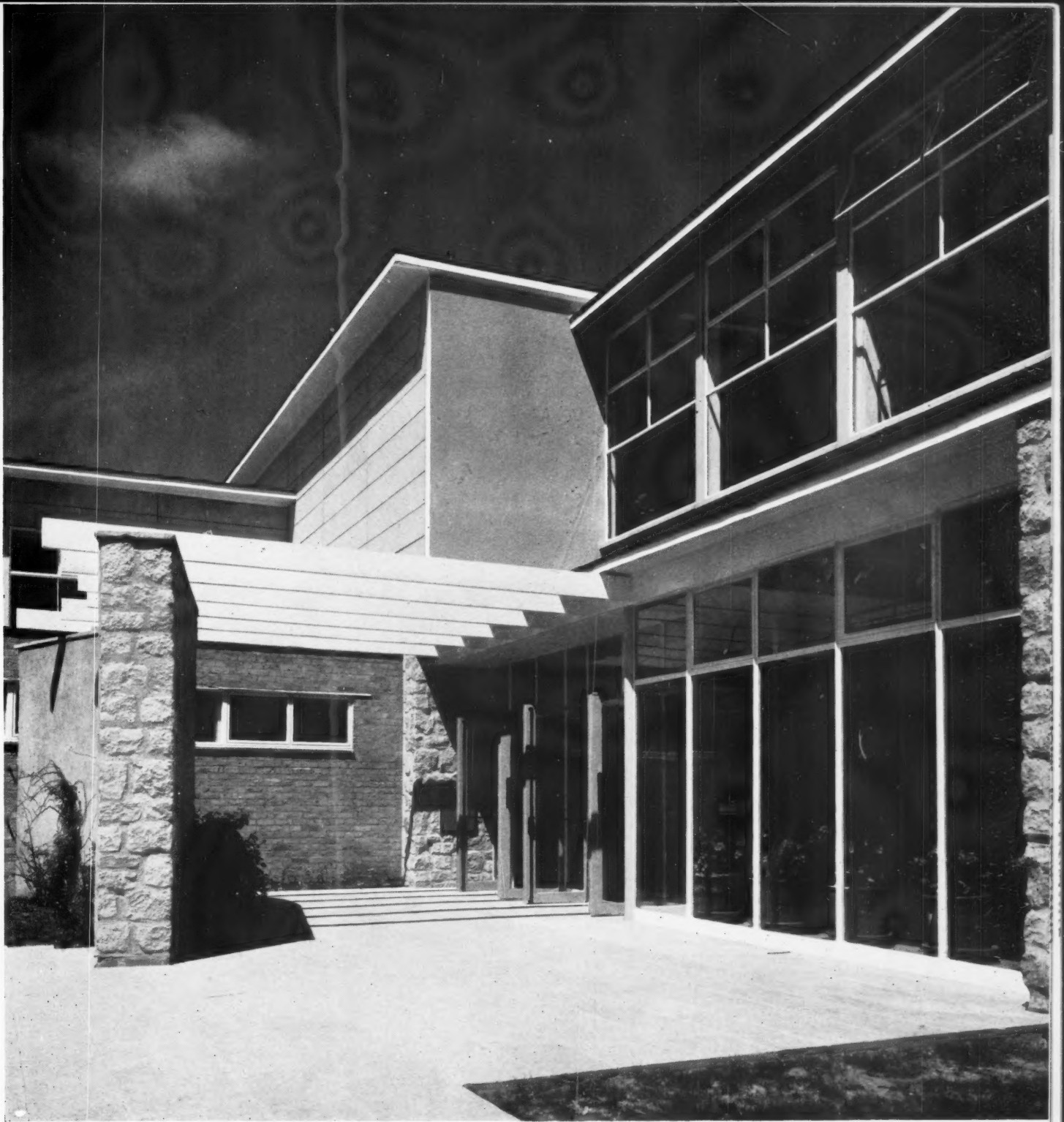
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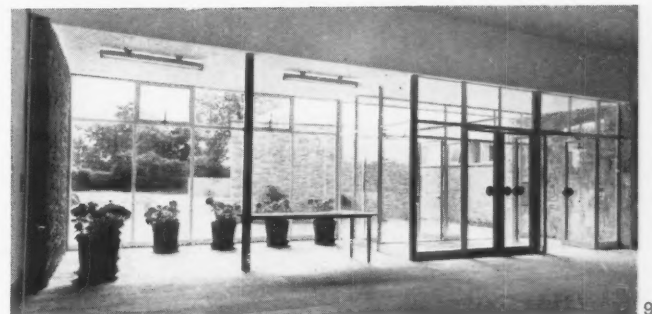


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8. main entrance from the south. 9. interior of entrance foyer looking west.

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10, entrance foyer and staircase looking south-east. 11, adult centre foyer and exhibition space. 12, entrance foyer staircase looking east on to playing fields. Facing page, 13, ground floor foyer, with mural by Kenneth Rowntree. 14, staircase to exhibition space and classrooms. 15, staircase in classroom block.

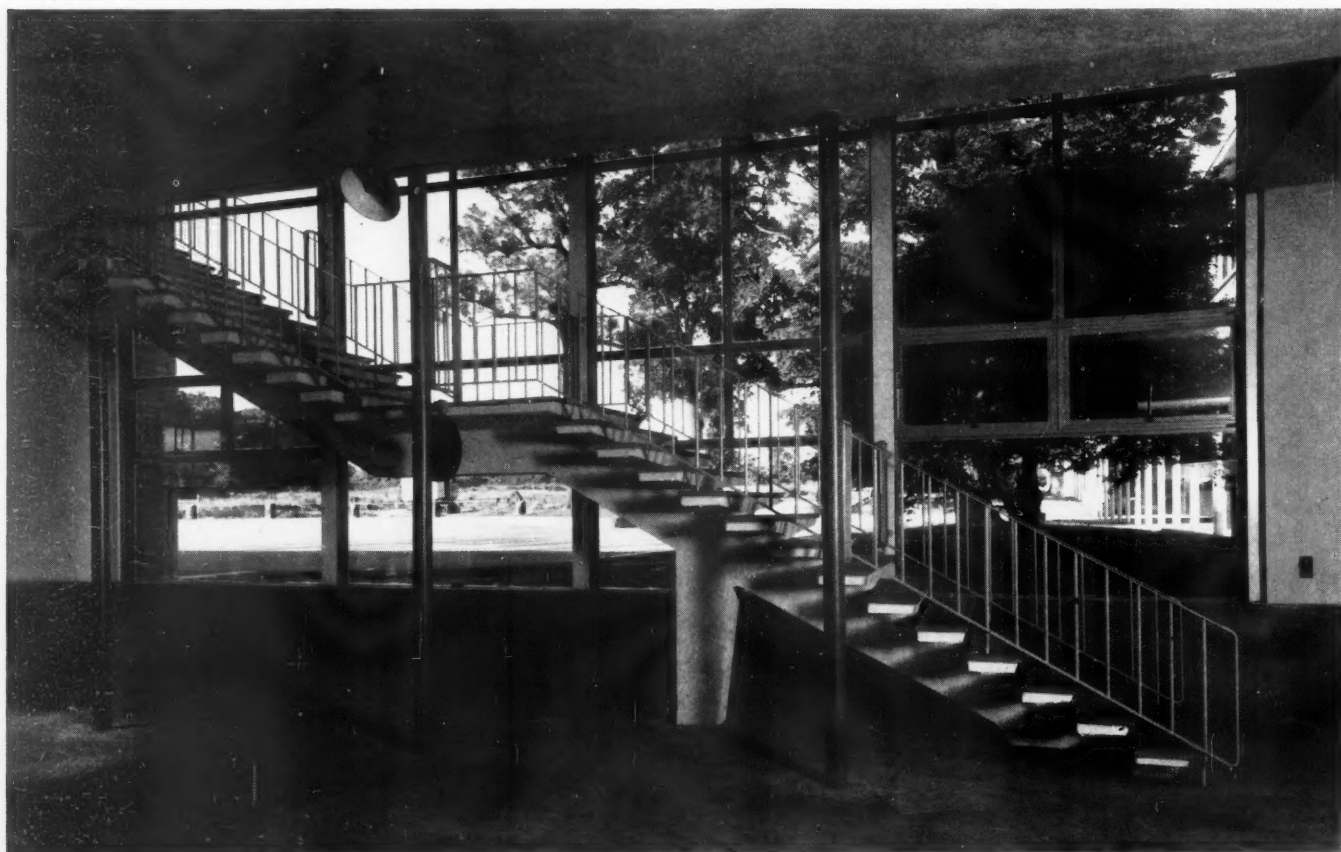


11

(contd. from page 172)

pipes and are generally finished with composition blocks; in cloakrooms and lavatories floors are clay tile. External walls have a 6 in. cavity and an outer cladding of concrete slabs, and inner lining of 3 in. breeze block. Flank walls not containing windows are brick. Interior walls are tiled to cill height and plastered above that.

light, heat and ventilation the building is wired throughout for lighting, power, telephones, clocks, bells and a remote-control radio system; the main switchboard is in a switch room near the assembly hall stage. All cables are small diameter, copper-sheathed and fire-

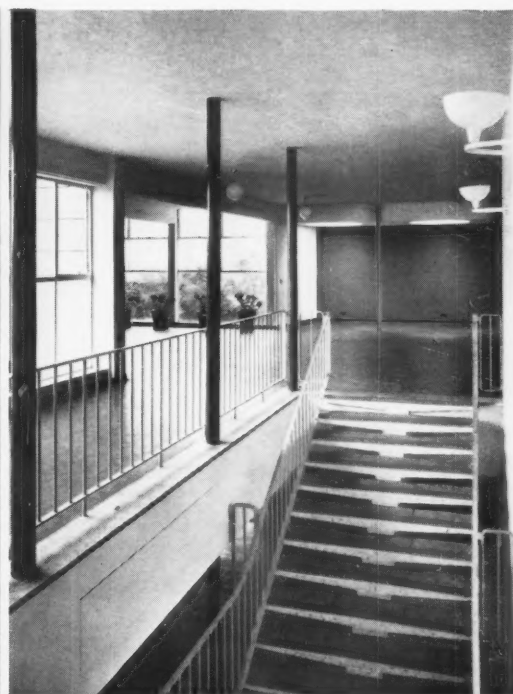
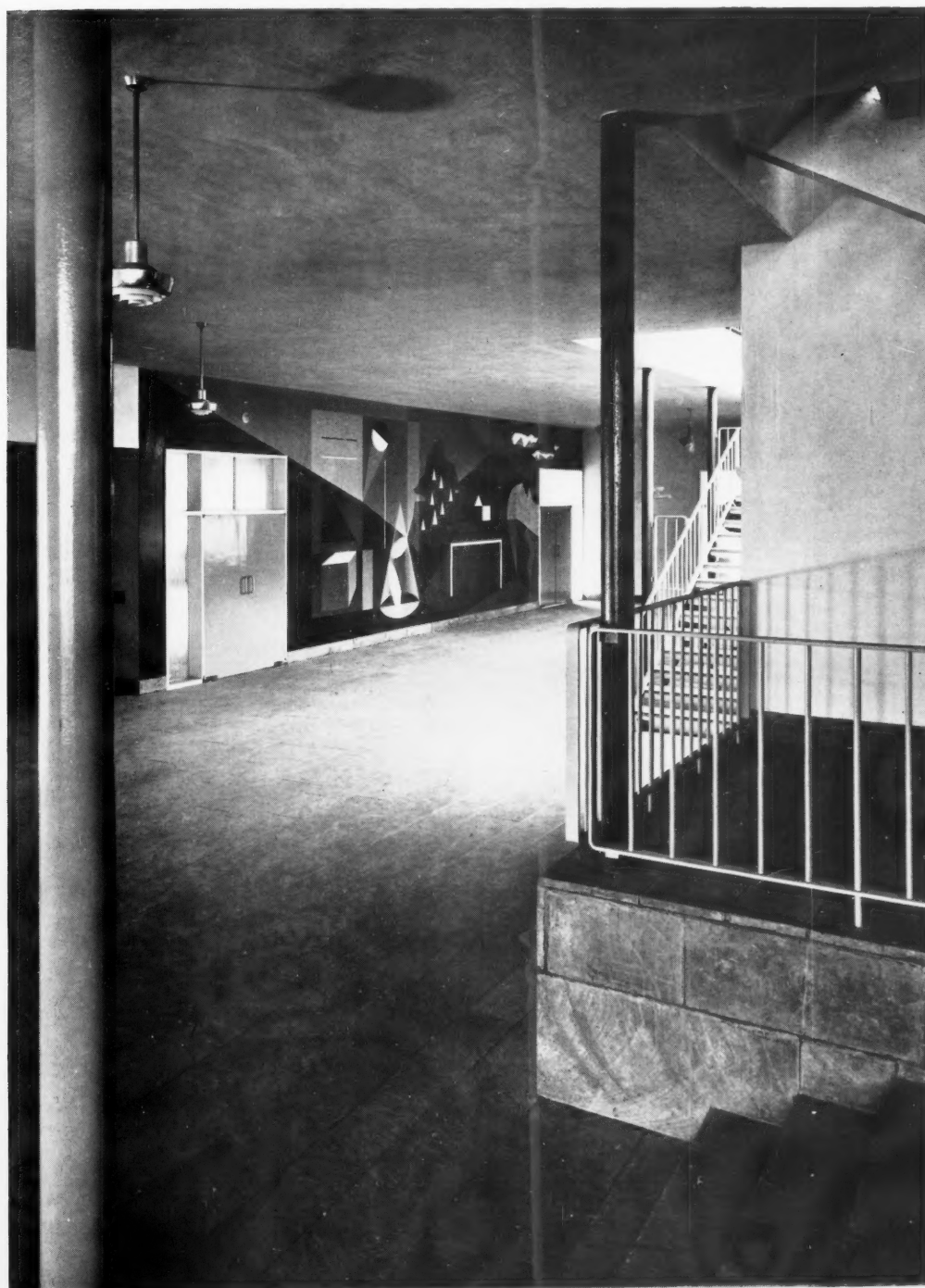


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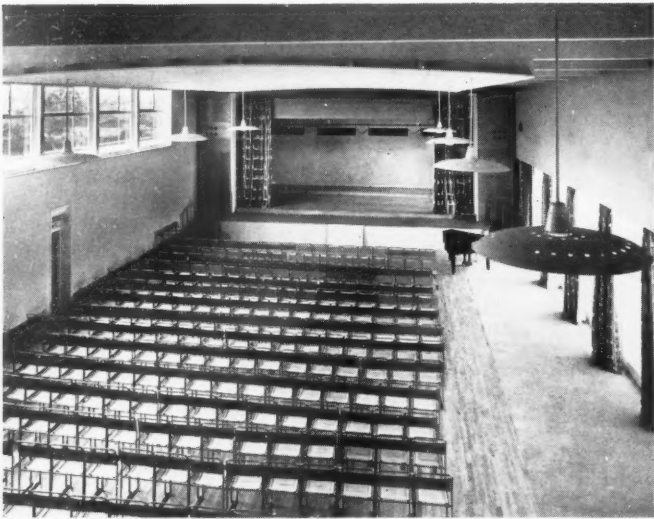
SCHOOL AT STEVENAGE

proof, and are laid in heating pipe ducts or in the floor screeding direct. Classroom lighting comprises metal reflectors and opal diffusing bowls for general use; blackboard lighting is by metal angle reflectors. Generally heating is by floor panels, which are supplied with warm water circulating in pipes embedded in the screed; the water is heated by thermostatically-controlled oil-fired boilers. In addition, a higher temperature circuit heats cloakrooms, lavatories, teachers' and

administrative rooms and workshops; pipe coils and flat wall panels are used in this part of the system. Hot water is provided from a separate oil-fired boiler, and circulates in copper piping to lavatories and kitchens, and to the showers in the gymnasium changing rooms. Exhaust air is extracted from the kitchens, internal cloakrooms and assembly hall by a number of electric fans, and the assembly hall is supplied with fresh air from a thermostatically-controlled ventilation system.



SCHOOL AT STEVENAGE



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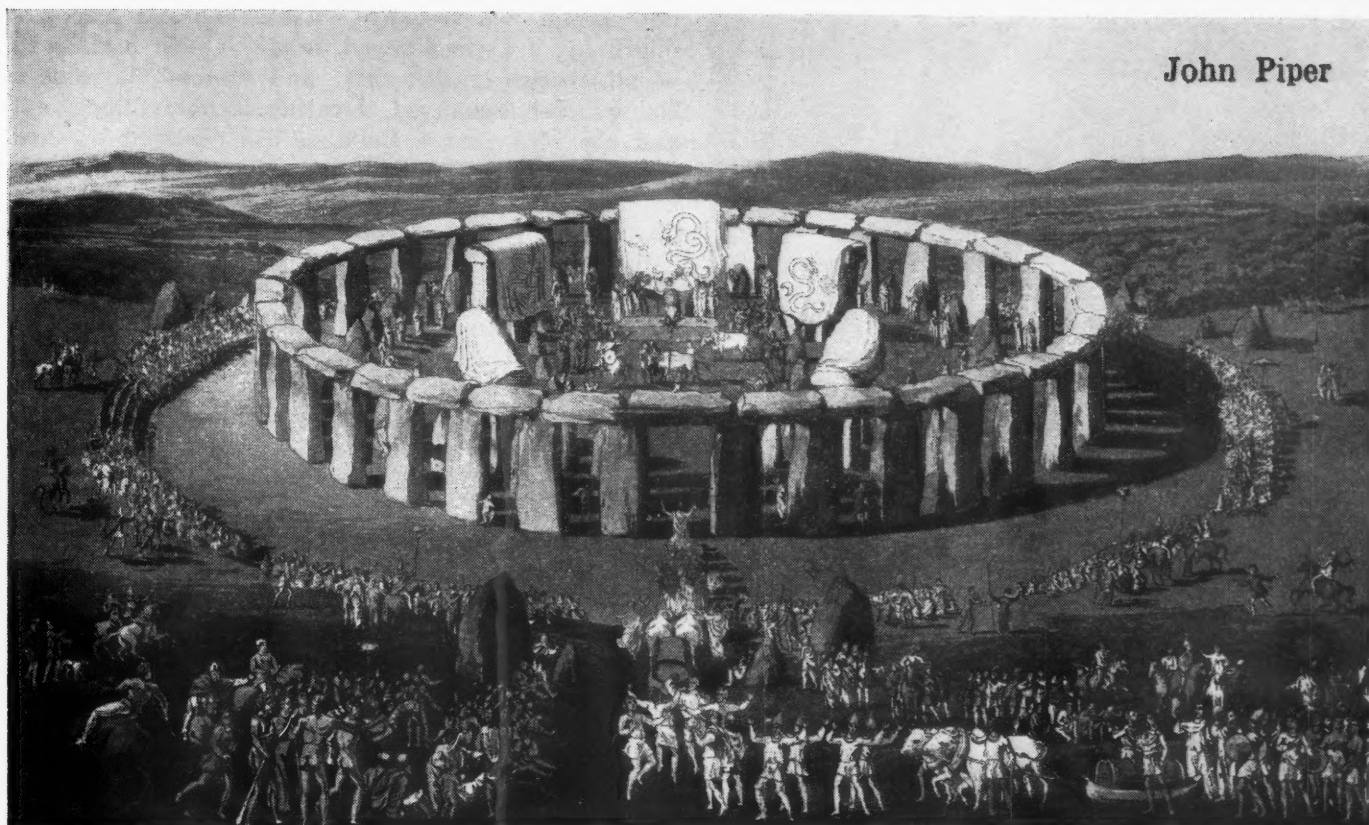
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16, assembly hall and stage. 17, dining room. 18, staff room. 19, a first-floor classroom. 20, classroom corridor. 21, boys' lavatory.

John Piper



an aquatint from Meyrick's Costume, 1815

STONEHENGE

REASSESSMENT 5: *No set of architectural objects has gone through greater vicissitudes in taste than the monoliths of Stonehenge, which have had everything from breaking up to iron railings round them. John Piper's reassessment places them in the modern age as one of the arguments for a modern age.*

IN THIS GUILTY AGE of orders and self-accusations the best that can be done by the Ministry of Works for the hopeful visitor, in the brochure which it sells for one penny on the site, is that 'Stonehenge has been an object of interest from the remote past and many of the theories about its construction, date and purpose have been equally wild and unfounded. . . . The persistent stories and considerable literature concerning Stonehenge and its connections with the Druids and human sacrifice have no support from historical or archaeological evidence. . . . Archaeological research . . . has proved that Stonehenge was in existence at least a hundred years before the earliest known existence of Druids. It [is] the most finished example of all Megalithic circles.' No, no, no, and only one yes—of the meaning of which we are not fully aware without some extra education. In 1876, William Long, a Wiltshire archaeologist, began a long and careful account by saying: 'Upon the mind of the thoughtful visitor two considerations can hardly

fail to press, and with considerable force, as he recovers from his first astonishment; the one being the very sacred character of the place to those who had selected this spot, and raised upon it this remarkable structure; the other the (probably) long period during which it must have served as a *locus consecratus* to the surrounding people.' Two positive and loving yeses. Further away from us, in the middle of the eighteenth century William Stukeley tumbled over himself with imaginative and delightful assertions, and John Aubrey before him was thrilled, during his lonely rides across the Plain, by the strong exhalations of humanity and worship that came from Stonehenge and Avebury. Today we are permitted to call Stonehenge beautiful or ugly at will, but are warned that it is not the point about it; we refer to its atmosphere of worship at our own risk, on the same terms as we leave our car in the car-park; but if we make a guess about its date and about who built it and why, and if these guesses do not add up to an arid 'Megalithic, for an unknown purpose,' then we are drunk and disorderly. The archaeologists have had a great deal to put up with at Stonehenge, and this is their reply.

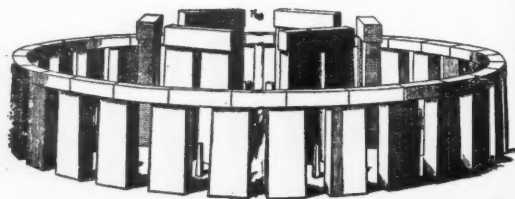
And so, every now and then, this needs saying: Stonehenge is one of the most beautiful man-made objects in Britain. Its beauty is in its size, materials and colour in relation to its site, and in the quality



that Henry James described as 'reassuring to the nerves; if you are disposed to feel that the life of man has rather a thin surface, and that we soon get to the bottom of things, the immemorial gray pillars may serve to represent for you the pathless vaults beneath the house of history.' It has been painted by many excellent English artists including Constable, Turner and David Cox and has stimulated many excellent writers from John Aubrey to Thomas Hardy, and beyond, to passages of good writing. But two modern prejudices tend to veil its beauty from us. First, we feel that over-fervent emotions about the past are

not decent, and secondly, that hackneyed places of pilgrimage are—hackneyed. It is the most hackneyed of all British monuments, and one of the oldest. Being so, it has changed. Or rather, if that is offensive—and the idea that a building has changed its constitution with time must be offensive to a fact seeker—man's vision of it has changed so much that one is at liberty to say it has changed. It is hard indeed to believe it has not done so if one turns to the first known depiction of the whole structure, an engraving in the British Museum signed 'R.F.' and dated 1571(4). Though just recognizably of Stonehenge, this picture is no more like the object we see on Salisbury Plain than those beautiful gorgon-headed cauliflowers with which thirteenth-century illuminators and glass-painters represented trees are like the trees we see. Yet that engraver and Aubrey, Stukeley, Turner, Constable and ourselves all show a consciousness of its beauty and of its aura of worship; which makes the comments of William Long and Henry James quoted above more sympathetic to us, and more 'real,' than those of the Ministry of Works' denuded little brochure.

The wonder and admiration of generations of visitors have given it a chance to develop character like a slowly evolving animal. Men have dressed it in the clothes of their own imaginations, and the fashions have changed. And it has changed just so much as clothes can change character. Because of its inscrutable origin and purpose the fashions about it have altered more often than those about Durham Cathedral or Warwick Castle, and, because it was man-made, far more often than those about natural wonders like Gordale Scar or Snowdon. And its wonder increases with age, however modern archaeology arrests or controls it, like the wonder of glaciated rocks or wild, deserted landscapes that have been undisturbed for a long time: eyes have looked almost ceaselessly at it, taking from it whatever they wanted,



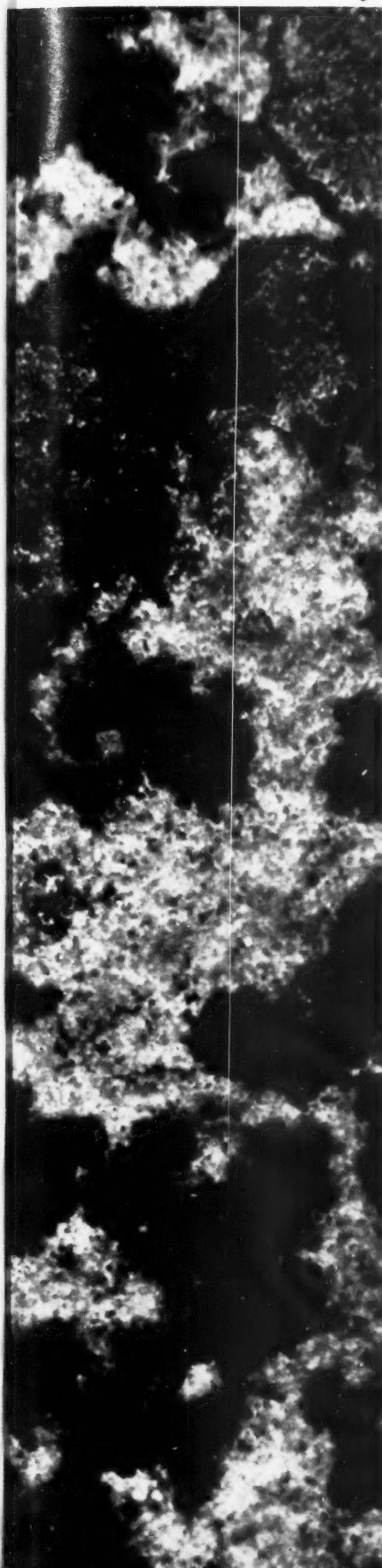
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2, Merlin builds Stonehenge, a detail from an illustrated English romance of the middle of the fourteenth century. 3, Stonehenge Restored, an engraving from the book of that name by Inigo Jones and J. Webb, published in 1655, which shows the monument seen as a Roman temple. 4, an engraving signed 'R.F. 1575,' which has been much imitated. The persistence of the idea that some of the trilithon capstones were the shape of sausage rolls was largely due to this engraving.



Stonehenge. Below, the stimulus of nearness. 5, a detail of the lichenous and mossy pattern which clothes the stones. It is these minute plants which, breaking up the surface, do so much to produce the effect of light and uncertainty of size on which so many travellers have remarked. 6, the lichen seen in its correct relation to the immensity of the monolith. The photographs on this and the next page are by the author.

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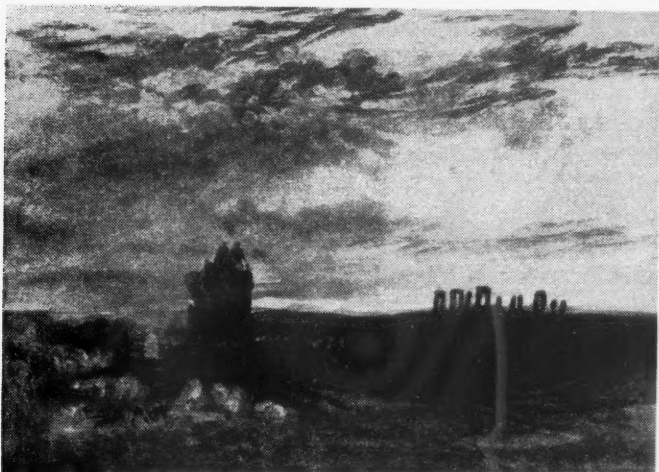
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7-10, on the facing page, four winter photographs by the author. 11, The Great Bustards, part of an engraving by David Loggan, circa 1690. An example of the accurate archaeologist's point of view.



12, aquatint from J. Robertson's Bath Roads, 1792, based on the engraving of 1575 (page 178, no. 4). The capstones reappear as sausage rolls on monoliths bent to the fierce blast of the artist's imagination.



Two nineteenth century romantic views. 13, Stonehenge at Sunset, a water-colour by J. M. W. Turner, 1815-1820. 14, Thunderstorm, an engraving by Nathaniel Whittock, 1823.



and leaving everything still to see, because there is no whole, permanent visual truth about it.

R.F.'s engraving of 1571 was copied, with small variations, by the illustrator of the second edition of Camden's *Britannia*, thence it appeared in many versions, some closely modelled on the original, some with wild, added generalizations. It was last closely followed in 1792, in an aquatint view in Robertson's *Bath Roads* (12). When the visitors began to come, many of them through Camden's advertisement of it, Stukeley's volume was in existence to play up the chameleon nature. The persistence of the idea that some of the trilithon capstones were the shape of sausage rolls came no doubt from the copyings of the Camden engraving, but surely many visitors saw them so, through the engraver's eyes. Inigo Jones saw in it the symmetry and properly-dressed decency of a Roman temple.* And then each age poured over it favourite historical and æsthetic prejudices. Aubrey first tentatively suggested Druids, and with Stukeley Druids became an enthusiasm, then an obsession; stimulating a public rising which even now the archaeologists are having to spend time trying to quell. The rising was the more widespread because Stukeley was not a bully: he wrote imaginatively and lovingly. From his day onwards the disparity of opinion about the appearance increases, in spite of, perhaps because of, the more frequent visits of artists and writers to the site and the fact that their vision is more immediately apprehensible to us. It is a far cry from the impersonal tidiness of Inigo Jones' drawings to the rich formalizations of Stukeley, done on his wave of enthusiasm. But it is a still farther one from his views to those depictions of lightning-struck, seemingly wool-clothed stones by Nathaniel Whittock and other early lithographers.

The official Picturesque view may be found in William Gilpin, who visited Stonehenge on his West of England Tour in 1798. He notes Horace Walpole's remark that everyone ascribes it to that class of antiquity of which he himself is most fond, and then Gilpin proceeds: 'it is not the *elegance of the work*, but the *grandeur of the idea*, that strikes us. The walk between the two circles . . . is awfully magnificent.' But in his hidebound way he decides that 'it is totally void, though in a ruinous state, of every idea of picturesque beauty . . . the stones are so uncouthly placed, that we found it was impossible to form them, from any stand, into a pleasing shape.' He reserves his poetry for the Plain. 'The ground is spread, indeed . . . like the ocean; but it is like the ocean after a storm, it is continually heaving in large swells.' Despite Turner and Constable and Henry James and Thomas Hardy we are still suffering from Gilpin's denigration of it, or rather from the congenital native insistence on the interest, at the expense of the beauty, of distant

* His posthumously published book on Stonehenge has engravings of a 'restoration' (3) and a weathered view of it in ruin, carefully engineered to agree with his reconstruction. William Gilpin says that Inigo Jones 'on his return from Italy, having nothing but Italian architecture in his head, he found out that Stonehenge was a Roman ruin.'

objects of pilgrimage.

But Turner and Constable had their effect. They looked intently, through all the cloaks of earlier love and prejudice, at the form of these stones on the empty plain. Constable presented them in broad, cloud-scaped daylight; Turner showed them at sunset, and by moonlight, and in a wild thunderstorm with sheep cowering under them. Hundreds of other artists, many of them slaves of 'interest,' have filled the site with suggestions of tragedies, feasts, sacrifices, mysterious rites; none of them producing half as much feeling as Turner did by looking, and by putting the cart of imagination after his horse of vision.

The site is no longer wild and deserted. Larkhill Camp is a clearly visible eyesore and the custodians' chalet, in a tasteless and dated 'art' style, flanks a car park; a turnstile revolves in the barbed-wire fence, and the Ladies and Gents is a good, solid eyecatcher, in a single block, with notices close to the grass pointing to it. These are signs of our barbarous times. One is jealous of Emerson who brought Carlyle here—'We walked round the stones, and clambered over them, to wont ourselves with their strange aspect and groupings, and found a nook sheltered from the wind among them, where C. lighted his cigar'—for he found 'within the enclosure, buttercups, nettles, and, all around, wild thyme, daisy, meadowsweet, goldenrod, thistle, and the carpeting grass.' He did not have to put up with the cut and rolled squares of



This study by W. O. Geller, circa 1830, is a visual rendering of the most common inventions—which by then had become beliefs—about the original Druidical-sacrifice purpose of Stonehenge. The sustained scorn of modern archaeologists has not yet rooted out belief in these romantic inventions.

turf which wait now in a pile to replace the tripper-trodden patches, on the shaven circle, or with the charas, and petrol fumes, and the lavatory. One is jealous of Lady Antrobus who, approaching the unfenced, nettle-grown site less than fifty years ago, found 'at first nothing to be seen but the crisp crackling grass underfoot and the white glittering roads; then, as one advances nearer, unexpectedly, dark, mysterious forms seem to

start up. . . . Picturesque shepherds, wrapped in their great dark blue cloaks, appear upon the horizon; tinkling sheep bells are heard, reminding one of the Roman Campagna; evening falling, brings a sense of peace and stillness, chimes from the old church at Amesbury float across the valley.'

On a winter day, when small pools of water lie in hollows of some of the fallen stones like sea-water in slabs of fallen cliff on a beach after the tide has gone out, and when sun and shadow alternate so that from a few points the sense that the stones stand firmly in circles is made plain and then, as the light changes, the sense of ruin or chaotic arrangement succeeds; and when from the trodden, re-turfed and re-trodden grass the stones rise dark grey with their specklings of white lichen, and then again, in brightening light, sparkle into ochres and umbers and contradict their natures by becoming insubstantial—then it is still possible to recognize here a giant of visual drama and intensity.



16, a large oil painting by Richard Tongue, 1837. Tongue did a number of paintings of dolmens and stone circles in England and Brittany, attempting sober records which he obviously thought would have more value—and, ultimately, even more romance—than faked reconstructions concerning human sacrifice and serpent-worship. 17, the same view of Stonehenge in 1949, photographed by John Piper.

R M S ORCADES

is the latest Orient liner to be put into service. The whole of the decoration of the interior was carried out under the direction of Brian O'Rorke, whose pre-war work on the Orion and the first Orcades is still a landmark in a field of design where mediocrity, relieved by occasional flashes of vulgarity, is the rule. Apart from the purchase of pictures by contemporary artists, which decorate the public rooms of the Orcades, a number of murals was commissioned by such artists as Barbara Jones, Edward Bawden, Douglas Annand, and Kenneth Rowntree. These are shown in their setting on this and the following pages.



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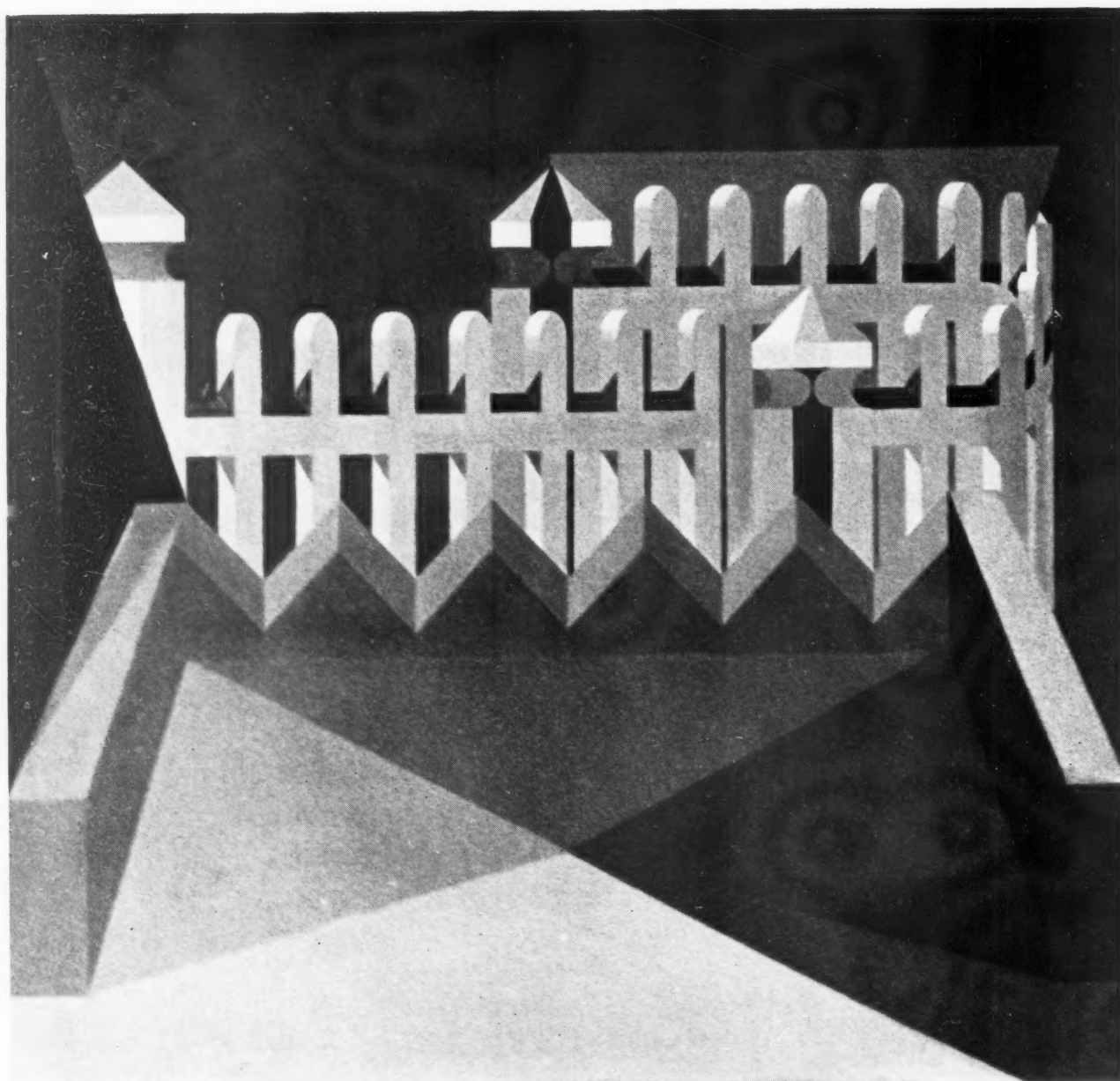
On the half landings of the main stairway are six small decorative paintings in shallow glazed boxes set in the wall. Between the painted panel and the protective glass of the frame is a second sheet of glass, on which part of the design is painted, giving an effect in depth somewhat reminiscent of a stage setting. 1 and 2 show a pair of panels by Barbara Jones; 3 shows the setting of 1 and its position on the stairway landing. 4, one of a pair of similar panels by Kenneth Rowntree.



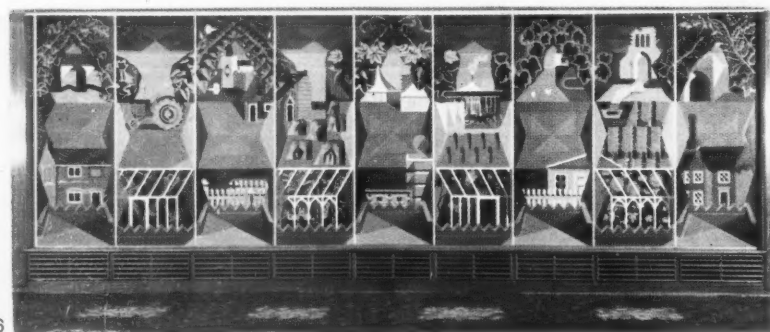
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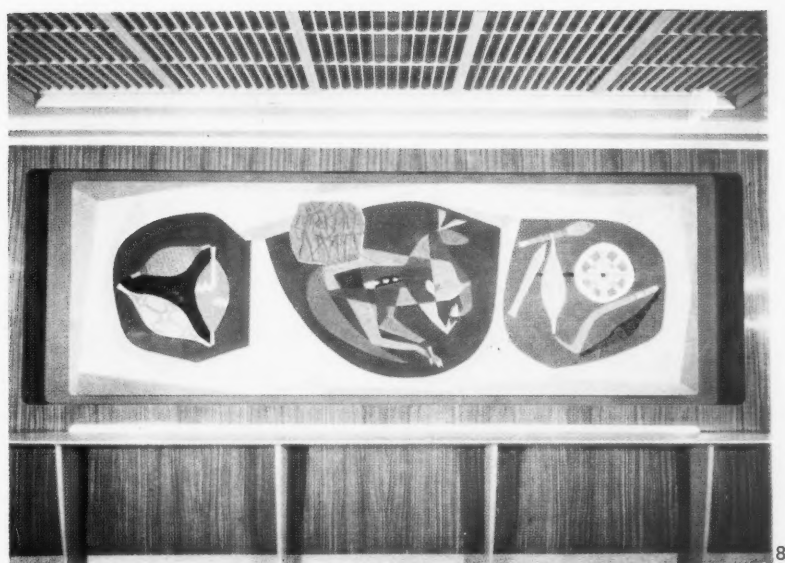
A large mural by Edward Bawden was commissioned as an integral part of the decoration of the first-class lounge. The theme is the County of Essex in autumn, and the treatment of this subject forms itself into a series of screen-like panels in a limited number of colours. 5 is a detail of one of the succession of fences, greenhouses and buildings forming the lower part of the mural which makes an ingenious use of white accents, 6 shows the mural complete, and 7 shows its relation to the furnishing of the lounge.



7

R. M. S. ORCADES

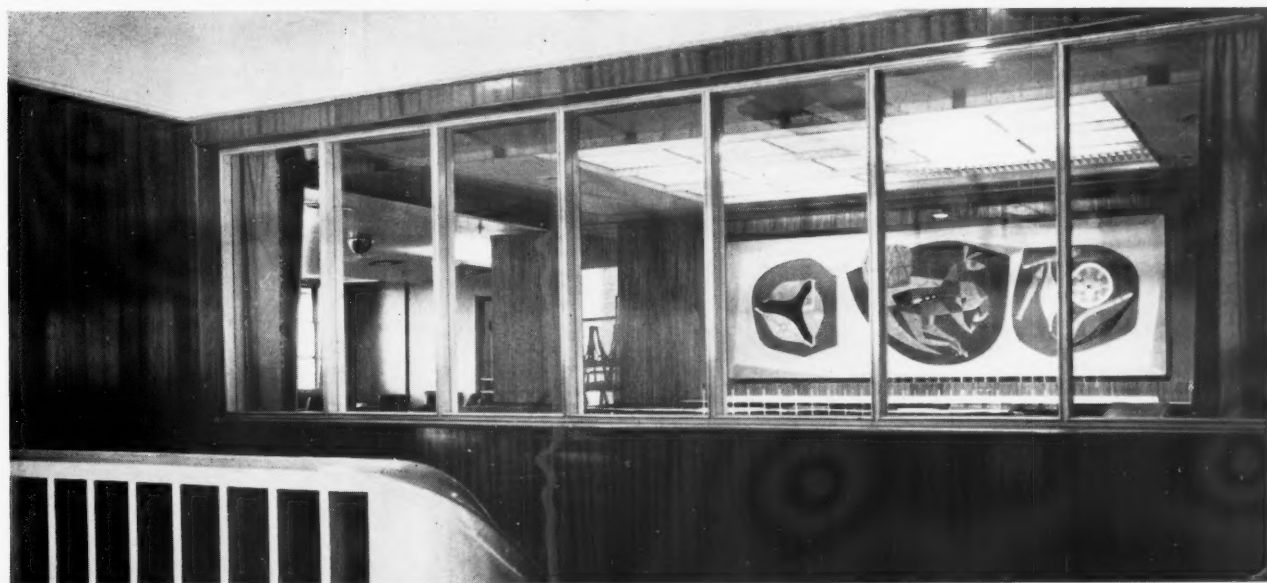
This mural, *The Kangaroo Hunt*, by Douglas Annand, is in the first-class café. The motifs derive from the bark paintings and decorated weapons of various aboriginal tribes of Australia. 8 is the complete panel; the components are, left, decorated native shields; centre, the running kangaroo; right, boomerangs and clubs; the orange panel above the kangaroo shows a conference of tribal hunters. 9, the mural as background. 10, the mural from the main stairway.



8



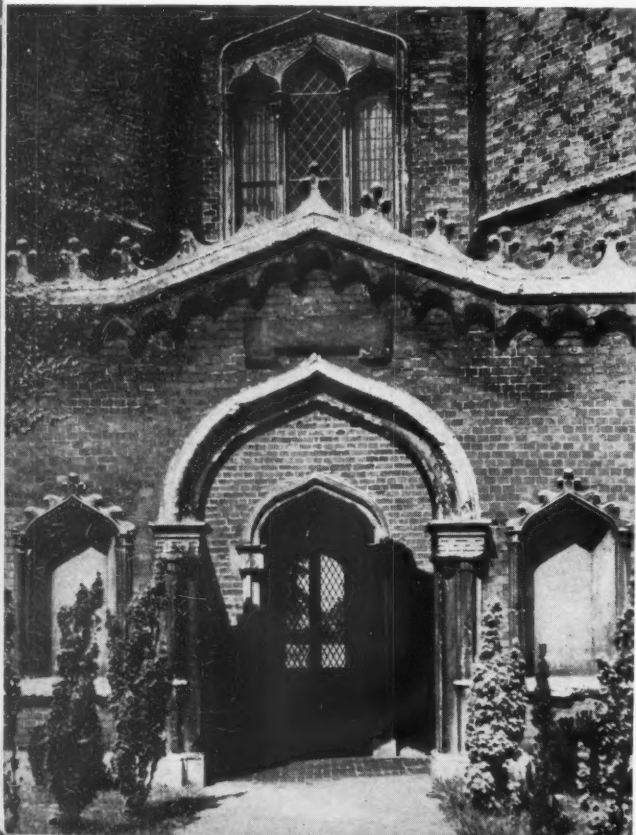
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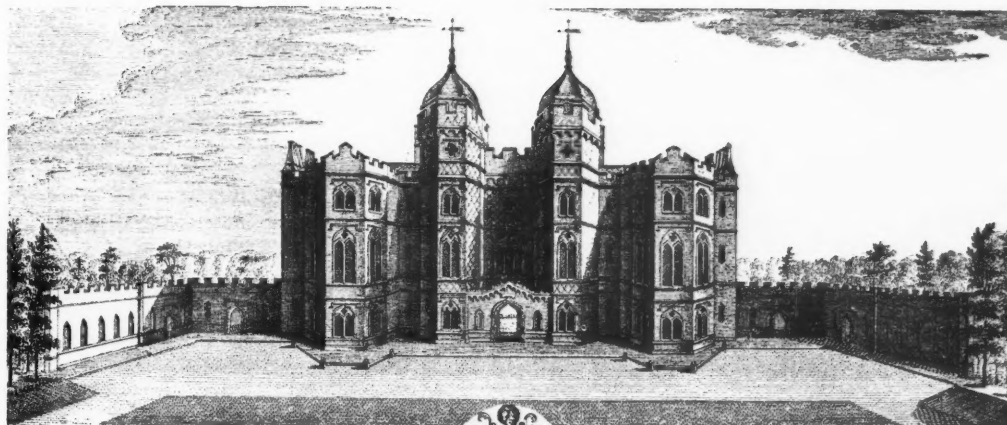


1



WAYNFLETE'S TOWER

1, Waynflete's Tower as it stands today. Attributed to John Cowper, it is called after the great statesman who added it to his episcopal residence during the latter half of the fifteenth century. In 1729 Henry Pelham commissioned Kent to design a villa round the nucleus of the tower and the result is shown in a contemporary engraving, 4, on the facing page. 2 and 3 are details of Kent's additions to the tower, which is now all that remains on the site.



4



KENTISSIME

IN 1729 HENRY PELHAM, the astute and not too scrupulous financial genius who steered England through eleven critical years in the middle of the eighteenth century, bought the estate of Esher Place in Surrey—influenced, probably, by the fact that his brother, the Duke of Newcastle, had acquired the neighbouring manor of Claremont. On the low ground near the river Mole he found a brick gate-house and some out-buildings, the surviving portion of that palace of the Bishops of Winchester which had played its part in English history as the prison of Cardinal Wolsey, and also of the Armada admiral de Valdez.

Mr. John Harvey* has put forward John Cowper as the designer of this gate-house, called Waynflete's Tower after the great statesman who added it to his episcopal residence during the latter half of the fifteenth century, and who is known to have employed that master 'brekke-mason' at Eton and Tattershall. It is a four-storeyed building of diapered red brick, with two semi-octagonal projecting turrets on the outer side, which faces east, and the angles splayed on the river front, which once formed part of the eastern range of the courtyard.

In his choice of William Kent as architect Pelham showed himself well abreast of the taste of the age. For at this time, it must be remembered, Kent was known mainly as a painter: his day as an architect had dawned, indeed, but was not to reach its high noon until the late 'thirties. But the villa he contrived for Pelham round the nucleus of Waynflete's

Tower was not only one of Kent's earliest works in architecture proper; it was also one of the very earliest houses of the Gothic Revival. As such, it has a significance which entitles it to somewhat fuller treatment than it has hitherto received.*

On either side of Waynflete's Tower, Kent added a wing of three storeys with deep bays flanking the entrance. An early print shows a square court surrounded by an embattled wall on this side of the building—an arrangement which appears to have been later replaced by a bolder treatment, with the boundary walls sweeping round in two quadrants to end in low pavilions.

Besides adding doorways with fantastic capitals, Kent ripped the original windows from the Tower and replaced them by ogee arches and plate tracery, or enormous quatrefoils, to match those he had inserted in the wings. The cornice, with a steep cement weathering and brick 'dentils,' is also his work, as, apparently, were two ogival lead-roofs to the turrets which are not shown on a plan of 1606 (formerly in the possession of Lord D'Abernon) and have long ago disappeared. In the later prints the rows of curious little chimneys (like so many front collar-studs) gave way to something loftier and doubtless more efficient.

Through the ground floor of the gate-house runs the usual carriage-way and Kent, in closing either end to form a hall, found himself up against a difficulty which would not have worried a mediæval

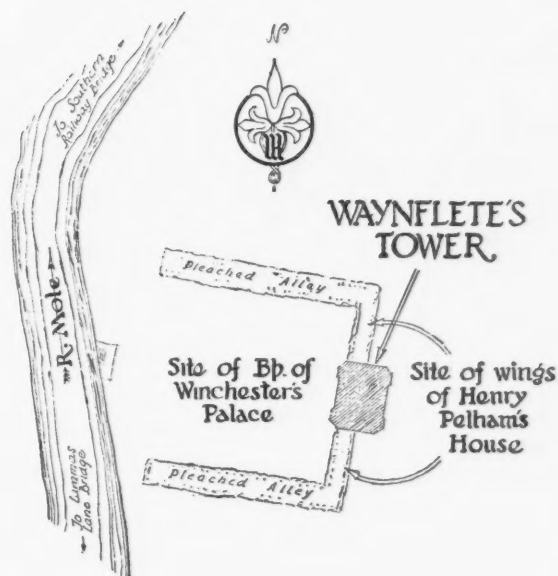
architect but was calculated to distress an eighteenth-century one. The walls of the carriage-way are set out accurately at right-angles to the main front, but the north and south walls of the Tower are not—with the result that Kent had to choose between making his new western door either nine inches out of centre on external elevation, or the same distance asymmetrical internally. His solution of the problem was a truly British compromise: four and a half inches either way.

Next he proceeded to 'improve' the elaborate brick vault by deepening the ribs in plaster, moulded

with a floral design and flanked by beading. The portcullis slots in the roof were doubtless also decently concealed; the portcullises themselves can never have been more than ornamental, for the rambling palace was certainly not defensible. Other alterations to the ground floor consisted in cutting away the wall separating the carriage-way from the north guard-room, to form an arcade which was balanced by canopies over a recess and a seat in the opposite wall. Finally Kent constructed a porch by joining the inner splay faces of the front turrets with a screen wall, furnished with two niches decorated with those peculiar, flat, wave-like crockets beloved of Gothick architects, and finished with a bold, stone cresting.

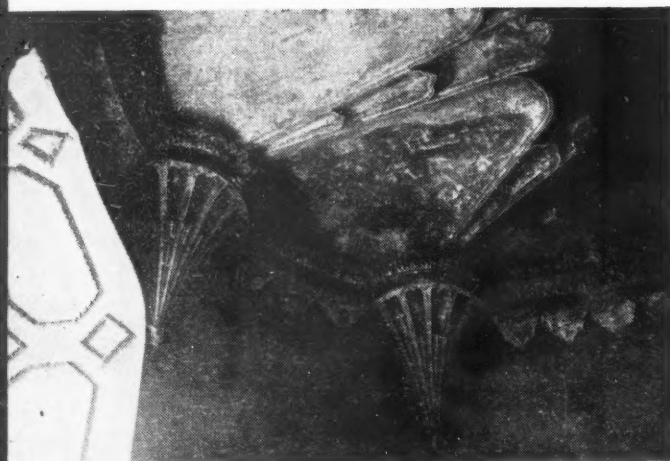
In the north-west corner of the Tower is the original newel stair, a very pretty piece of craftsmanship in brick, but this was apparently relegated to the servants by Kent, who constructed a grand stair-way in the north-east turret, of which only the well now remains. On the window-splay, however, is an elaborate plaster ornament, and the ceiling above is decorated with a cornice embodying both acanthus and 'fans,' a marriage of classical and mediæval detail which has all the charm of Georgian Gothick at its best. On the first floor also can be seen the rash way in which the architect cut into the brickwork of one of the splay walls, to 'square-up' his principal room; but otherwise the only evidence of Kent's alterations now visible on the upper floors are a few featureless fire-place openings and bricked-up doorways.

Early in the nineteenth century, a new owner of the estate preferred to build on higher ground, and once again the building was demolished except for Waynflete's Tower. This was carefully restored by Lord D'Abernon about 1912,



* Miss Margaret Jourdain, *The Work of William Kent*, 1948, accords it only one illustration and two references in her text.

* *Gothic England*, 1947.

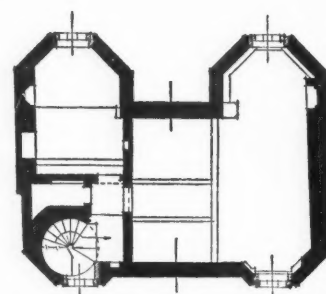
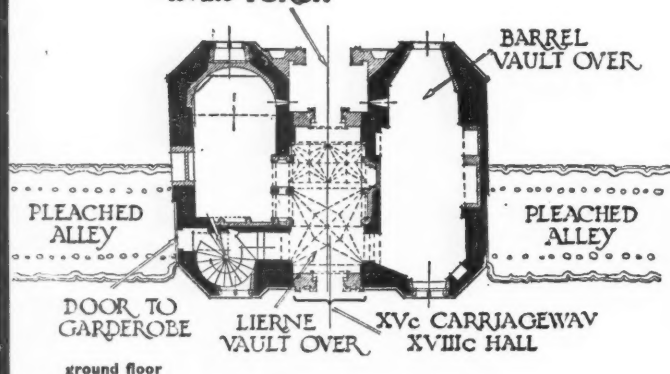


WAYNFLETE'S TOWER 6, a detail of one of Kent's ceilings in the northeast turret of the tower. The cornice embodies both acanthus and 'fans,' 'a marriage of classical and medieval detail which has all the charm of Georgian Gothic at its best'.

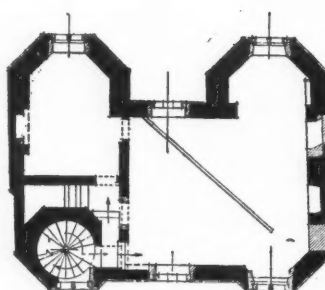
but once Esher Place was sold for development in the 'thirties, and thrown open to the public, windows were smashed, doors stove-in and heavy coping-stones hurled from the roof. In 1939 the Surrey Archaeological Society issued an abortive appeal for a restoration fund and, through the courtesy of Wayne's Holdings, the author was enabled to make a complete measured survey. A few months later the building was saved from destruction by being turned into a dwelling, which it still is.

Even before the inevitable rash of villas broke out, Kent's lay-out of the park had largely vanished. The belvedere on the hill, whence Horace Walpole watched a storm over Esher Church, and the 'cave' in the wood, where he consumed syllabubs and listened to an impromptu concert (both visible in the well-known print of the house viewed from the river) have both disappeared. The temple, which in 1939 was still standing at the end of the lake to the north of the Tower, is a heap of rubble. Only through the medium of contemporary prints can we gain any idea of the full beauty of the place of which Walpole wrote ecstatically: 'Esher I like best of all Villas, Kent is Kentissime there!'

XVIIIc PORCH

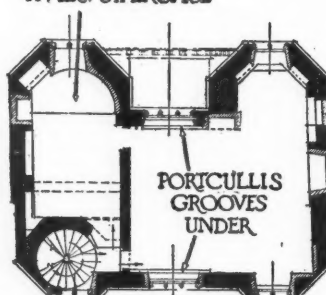


third floor



second floor

WELL OF XVIIIc STAIRCASE



first floor

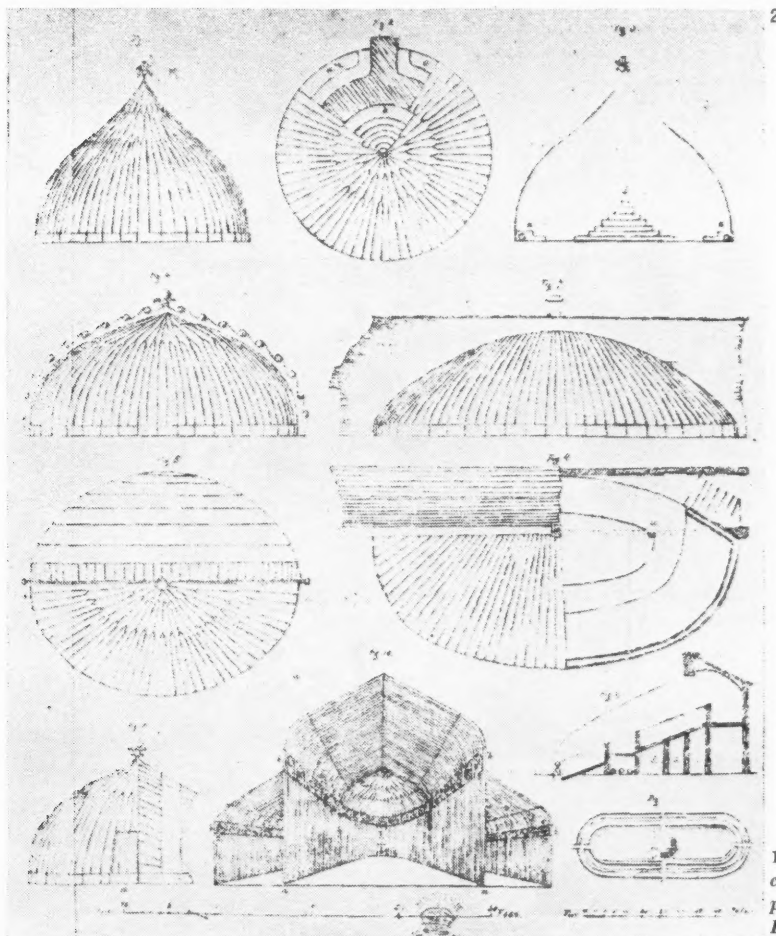
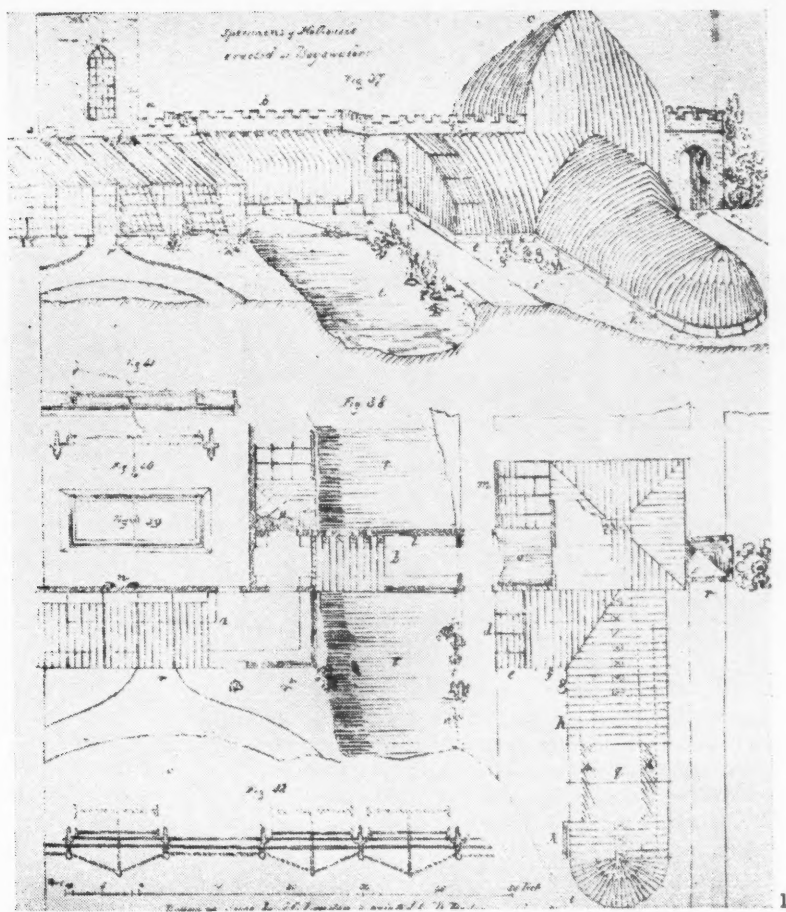
Scale 0 10 20 30 40 50 feet

Waynflete c 1475 Alterations chiefly by William Kent 1729

Early Iron

2 Curvilinear Hothouses Mr. McGrath in his *Glass in Architecture and Decoration*, 1937, p. 108, speaks briefly of early English conservatories with curved roofs or domes. The details he gives are not entirely accurate, but more accurate than Dr. Giedion's, who, in *Space, Time and Architecture*, 1941, p. 114, states that 'the first large structure consisting simply of an iron framework and glass panes was a French conservatory, les serres des jardins du Musee d'Histoire naturelle . . . at Paris, built by Rouhault in 1833.' The true story, as far as I can make it out at the moment, seems to be like this: In 1815 Sir G. S. Mackenzie, Bart., published a letter to Sir Joseph Banks in the *Transactions of the Horticultural Society* (vol. II) in which he suggests that glass in the form of 'the segment of a globe' would give the best insulation to green-houses and besides an appearance of 'neatness, I may say elegance.' Two years later T. A. Knight, brother of the more famous Richard Payne Knight from whom he had taken over Downton Castle, confirmed Sir G. S. Mackenzie's suggestion but suggested a shallower curve instead of Mackenzie's (*Trans. Hort. Soc.*, vol. II). In 1822 he reported of three summers' experience with such a hothouse on his own estate (*Trans. Hort. Soc.* V). Meanwhile however John Claudius Loudon, professional gardener and journalist, had published in 1817 a pamphlet called *Remarks on the Construction of Hothouses* and in 1818 another with the title *Sketches of Curvilinear Hothouses*. The illustrations on the facing page are taken from the latter. They prove that by then the shapes which were to become most usual were ready at least on paper. In 1822 Loudon could report (*Encyclopaedia of Gardening*, p. 353) that a conservatory on his principle had been erected by Messrs. Loddige, the 'spirited cultivators,' which was 45 feet high, and another of 100 feet length. Loudon himself had some at his establishment in Bayswater too. By 1833, the date of the *Serres*, there must have been plenty of these domed or curved-roof hothouses in England, at Bretton Hall, Yorkshire, e.g., where a 'domical stove,' 60 feet high, was under construction in 1829 (*Gardener's Chronicle*, vol. V), and at Alton Towers. So the ancestry of Paxton is English and not French, as Dr. Giedion's account may lead one to assume.

NIKOLAUS PEVSNER



1 and 2, designs for early curvilinear hothouses from a pamphlet by John Claudius Loudon, published in 1818.

INDOOR



PLANTS

IN DENMARK

AFTER A PERIOD of eclipse, the green plant used for indoor decoration has, during the last twenty years, gained in popularity all over the world, not least in Denmark where the 'Kongevin' (rhoicissus rhomboidea), the Hawai flower and the gum tree with other species are to be found in almost every home. This interest is partly to be explained by the urge to be surrounded by flowers, indoors as well as out, but in Denmark particularly it is also a consequence of the climate in which garden flowers flourish only for a very short period of each year. It has, in fact, now become a common practice, not only in new houses but also in older ones, to plan a garden room which provides the nearest to ideal conditions for growing plants.

Architects in Denmark are now well-versed in the requirements of these rooms as well as of plant windows and window gardens. After construction it is usually the garden architect who designs the planting, and deals with any special technical problems. Actual planting and maintenance is often carried out by gardeners and florists who specialize in this work.

The very large choice of plants available means that garden architects are increasingly called upon for advice. In designing the planting it is important to consult people who possess an intimate knowledge of each kind of plant, for each has its own particular needs so far as light, air, heat, moisture and nourishment are concerned. These needs depend, of course, on the original habitat: a plant from tropical rain-forests will not grow satisfactorily under the same conditions as do, for instance, sub-tropical orchids. The whole anatomical structure of a plant is connected with soil, moisture and

temperature conditions. The task, therefore, is to provide conditions which approximate as closely as may be to those which are natural to each plant.

With regard to orientation, it must be remembered that windows facing north receive only diffused daylight, a factor which limits the kinds of plants that can be grown in them. An easterly or westerly aspect is somewhat better, but one must bear in mind the great difference between them. Sunshine from the east only warms gradually, whereas a window facing west will suddenly catch the full strength of the afternoon sun. A southerly aspect is, for most plants, best of all, particularly since it catches whatever there is of winter sunshine. On the other hand, both a south and a west window may require some shading during the sunny months of the year.

The Danish climate is such that although summer temperatures seldom exceed 25° to 30° C. (77° to 86° F.) in winter the temperature drops to -10° or -15° C. (14° or 5° F.), and in rare cases even to -25° C. (-13° F.). Such temperatures in conjunction with strong winds blowing during the coldest months, usually from the east, mean that proper heating of garden rooms and windows is exceptionally important. It is found, indeed, that many of our favourite plants have a 'freezing point' so high as to lose the urge to live at 4° or 5° C. (39° or 41° F.). The best method of heating is to place the source of heat underneath the plant boxes and so to dispose these that the hot air can rise between the window and the plants; for if there is anything a plant dislikes it is to have warm room air on one side and cold window air on the other.

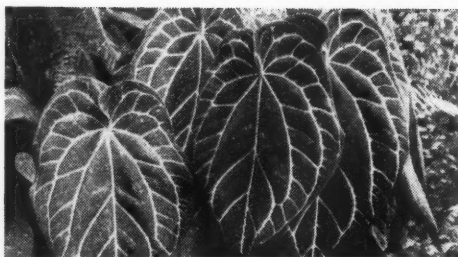
A factor which often hampers the growth of a plant is a too low relative humidity. In special garden rooms this can often be avoided by spraying the floor which, with that end in view, should preferably be paved. Failing this the plants themselves should be sprayed during warm periods. At the same time the boxes should be well watered so as to secure as large an evaporating surface as possible, any surplus water being afterwards removed. To prevent excess humidity opening windows should be provided, so placed that the plants are not exposed to a draught.

In Denmark a kind of standard has established itself for plant boxes, and it is customary to wash them over with white cement. The usual measurements are an implanted depth of 1½ to 2 in., a width of 14 in., and a depth of 10 to 12 in.

The actual planting is done either directly into a mixture of broken turf and mould, or by setting the plants in the mixture in pots. The latter method is to be preferred as it makes it easier to turn the plants towards the light and to take out defective ones.

Eywin Langkilde

INDOOR PLANTS IN DENMARK



1
2



3
4

Above, some of the most popular plants which are grown indoors in Denmark. 1, *Anthurium crystalinum*, needing considerable heat. *Platycerium bifurcatum*, 2, and *Monstera deliciosa*, 3, are among the most commonly used plants. 4, *Maranta*. The drawing, 5, is *Flatsia japonica*. Below, 6, is a big plant window in a Danish house, containing a considerable variety; the authors point out that the smaller ground plants are somewhat insufficient, and too much emphasis has been placed on larger growths of special character. The plants to be seen are, from left to right, *Eucalyptus globulus*; *Alocasia*; above this is *Platycerium bifurcatum*; *Ficus pumila*; *Tetrastigma voinierianum*. The long planting box conforms to a type which is almost standard for Danish window gardens.



5

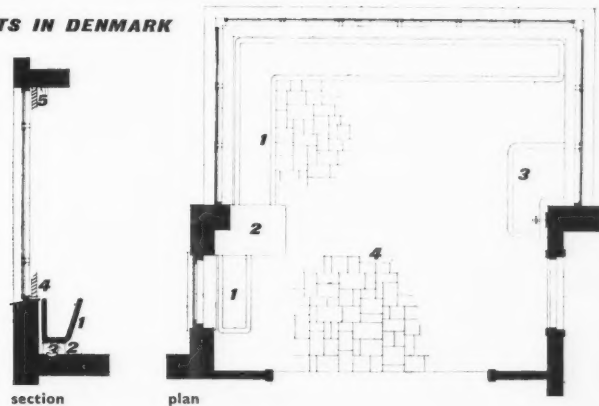


6



7

INDOOR PLANTS IN DENMARK



7 and 8, a large winter garden in a Copenhagen house. The water basin in the left foreground is planted with *Cyperus*. The plan is of the same room; 1, plant boxes; 2, plant table; 3, water basin; 4, floor of travertine slabs. The section is of a window in this room. The plant box, 1, is carried on two light iron brackets, 2, which make it easily removable to give access to the heating pipes, 3. A wooden blind of simple design, 4, is placed between the window glass and the plants, and a concealed tubular light fitting, 5, throws light directly on to the plants in the evening.



8



1

THE NAUTICAL STYLE 1, the iron ropes and anchors surrounding the monument to Admiral Kondyriotis, on the island of Hydra. The simple character of the ships' accessories, 2 and 3, is exploited brilliantly by those who employ them in everyday life, and understand their nature and function.



2



3



THE NAUTICAL STYLE

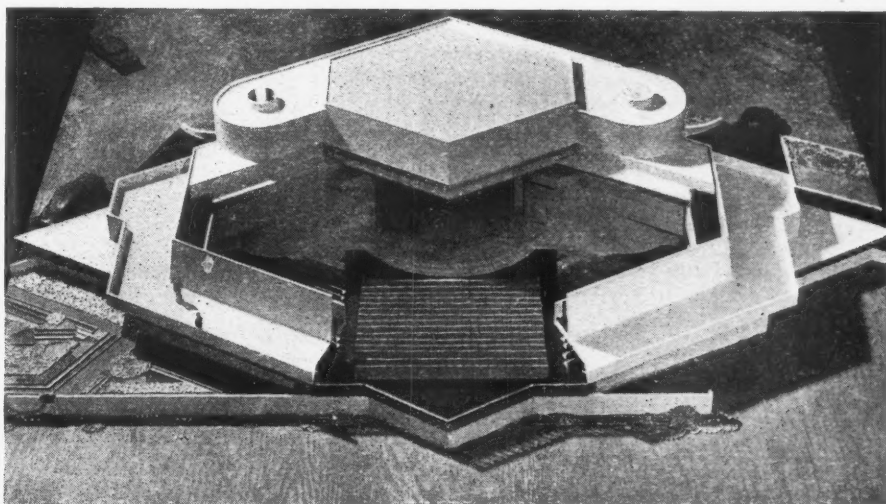
It is some time since painters recognized and gave their own interpretation of the functional tradition in architecture*—that strictly utilitarian field of construction by people with untrained but lively sensibilities. Architects, strangely enough, have so far given it a wide berth, as they have that other aspect of it, again assimilated by painters and all but ignored by architects, its embellishment—to take the most obvious examples, the black and white abstractions of the nautical, and the brilliantly coloured elaborations of the peasant style (viz. roundabouts). The railing opposite illustrates perfectly that inspiration through utility which is the basis of the true nautical style. It shows a conscious aesthetic appreciation of simple functional objects by those who make and use them. So acute is the observation that they seem actually to be in use. Here are no dolphins, no nymphs, no tritons blowing conches, but simply the anchor and the rope, which, transmuted through the decorative tradition of the nautical style, achieve a symbolism with vigour and meaning. The monument is to be found in the island of Hydra, Greece, where every detail of the environment (see *THE ARCHITECTURAL REVIEW*, March, 1949, pp. 133-138) is both functional and indigenous. Form and decoration there have always been strictly subordinated to the severe demands of daily life, and the toughness of the physical environment has combined with a seafaring tradition severely to limit the play of fantasy. Although never more than nominally subject to the Turk, the island's position in the Eastern Mediterranean has ensured the observance of that oriental caution which, from Marrakesh to Tabriz, causes the wealthy to enrich the interiors of their houses rather than the facades. When, therefore, the Hydriots wished to commemorate their most famous son, the great admiral Kondyriotis, they were relatively unfamiliar with the nineteenth century tradition of monumental symbolism which has littered all the plazas of the world with weeping Niobes, stalwart male nudes, and vast shrubberies of cast-iron laurels, palms and olives. Their sophistication stopped short at a white marble portrait bust of the deceased, raised on a stepped plinth; for the surrounding railings they fell back on their own resources. Obviously the naval career of the hero must be emphasized, and the two nautical objects with which everyone was familiar (and the employment of which would involve no difficult feats of representation) were anchors and ropes. The result, in a setting right on the quayside with no rivals but the bases of classic columns converted into bollards, is one hundred per cent. successful.

* As opposed to 'architect's functionalism.'

WORLD news in architecture

This is the fourth of the REVIEW's reports on occurrences of architectural interest throughout the world. A note on Frank Lloyd Wright's new theatre is presented, together with a project for a gymnastic centre and two small dwelling houses, from various locations as far apart as the United States and the Antipodes.

UNITED STATES



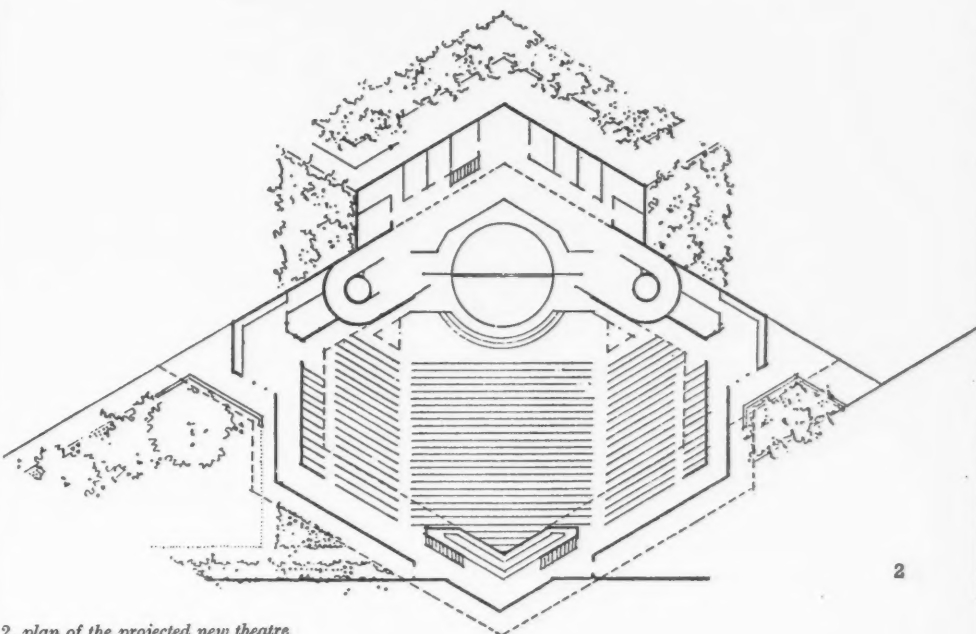
1, model of the projected new theatre

1, 2, NEW THEATRE, HARTFORD, CONNECTICUT

Designed to seat between 850 and 1,000 people, this theatre by Frank Lloyd Wright will be built by the end of this year. The hexagonal shape is planned to reduce congestion to a minimum; two lobbies for entrances and exits, one on each side of the building, relieve the problem of crowding by the moving audience. A prominent feature is the terrace, which almost encircles the building

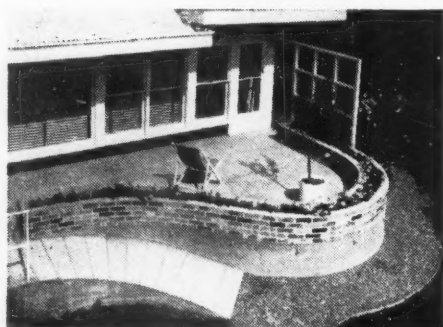
at balcony height, for use as a promenade during intervals. A corresponding smaller terrace for artistes runs above the dressing-rooms at the rear of the building. Scenery is stored and assembled in workshops behind and beneath the stage; two lifts and ramps are provided to move it on and off the sets. The stage itself is revolving, and has no fixed proscenium, although a false arch can be erected when needed.

David Pleydell Bouverie



2, plan of the projected new theatre

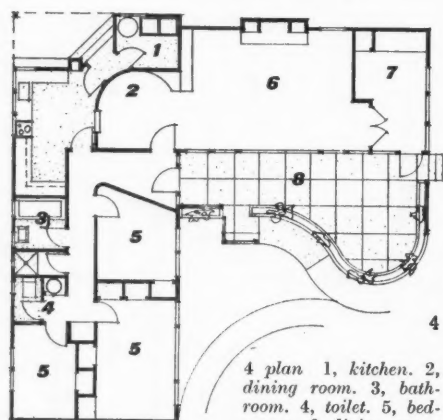
NEW ZEALAND



3, living-room doors and terrace

3, 4, HOUSE IN CHRISTCHURCH

Building in New Zealand is severely limited by restrictions on cost and overall area, so modern dwelling-houses are typically small and timber-framed. The L-shaped plan of this house, with bedrooms and living-rooms in separate wings, is ideal for local conditions; the projecting sun terrace at the front of the house affords protection from cold winds. Architect: Humphrey Hall.



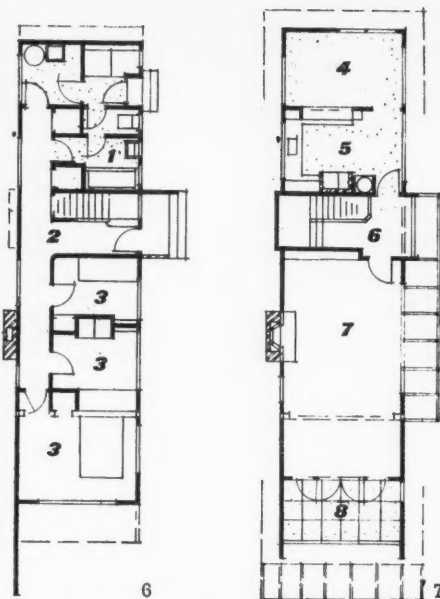
4 plan 1, kitchen. 2, dining room. 3, bath-room. 4, toilet. 5, bedrooms. 6, living room. 7, sitting room. 8, terrace.



5, west elevation

5-7, HOUSE IN CHRISTCHURCH

This timber-framed house has a narrow section width of 33 feet; the weather-board facing helped to reduce constructional cost. Living-rooms and kitchen are on the upper floor, and the partly



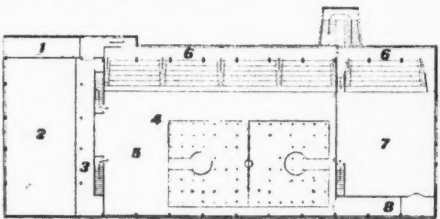
6 ground floor 1, bathroom. 2, hall. 3, bedrooms. 7 first floor 4, games room. 5, kitchen. 6, landing. 7, living room. 8, balcony.

overhung balcony makes the best advantage of fine mountain views; bedrooms are on the ground floor. Architect: Paul Pascoe.

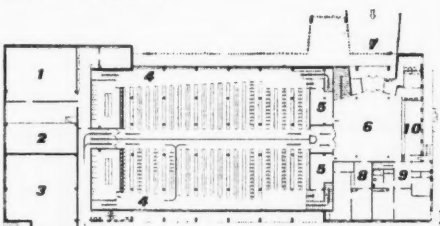
Aorangi



8, perspective of projected centre



9 first floor 1, store. 2, fencing, boxing. 3, gallery. 4, hall. 5, gymnastic apparatus. 6, spectators. 7, table tennis. 8, store.



10 ground floor 1, fuel. 2, machinery. 3, store. 4, gymnasts' cloakroom. 5, guests' cloakroom. 6, hall. 7, entrance. 8, office. 9, manager's flat. 10, cloakroom.

8-10, PHYSICAL TRAINING CENTRE, BOHEMIA

This design is for a gymnastic and physical training centre to be built in the expanding coal-mining town of Horní Litvinov in Northern Bohemia. It is to be built under a National Health Scheme operated by the Czechoslovak Government. Architect: F. Marek.

Stan Trubacek

BOOKS

SIR WILLIAM'S CLIENT

THE VOLUNTEER EARL. By Maurice James Craig. Cresset Press. 18s.

JAMES CAULFIELD, first Earl of Charlemont, for whom Sir William Chambers designed that brilliant architectural gem the Marino Casino at Clontarf and the graceful town house in Dublin which still bears the name of Charlemont, was the leader of the great Irish Volunteer Movement, which, while it sprang from the fear of French invasion in the last quarter of the eighteenth century, helped to secure for Grattan that free constitution under the same crown as England to which the brief golden age of Irish architecture gave lasting expression.

Mr. Craig does admirable justice to a fascinating subject. His scholarly and well-documented presentation is held together by a thread of sensitive comment. His research is never tedious, and his selection always entertaining. The clarity of his crisp style is only very occasionally interrupted by an excess of brevity. And a reader must wish here and there that a few more of the documents referred to, such as Charlemont's epistolary preface to his political autobiography, were included in the appendices. Perhaps a later edition might be enlarged in this way.

Mr. Craig shows us the young Charlemont setting off on the Grand Tour, and devotes some entertaining pages to describing his acquaintance with David Hume at the court of Turin and the unfortunate suit of the inelegant philosopher for a lady whose friendship the young Irishman enjoyed. Charlemont's subsequent adventures in Constantinople, where his friend Frank Burton laughed so much in a mosque that his life was only saved by Charlemont's presence of mind in pretending he was having a fit, or in the Greek islands where, at Micone, he and his friends cut some curious capers, are equally entertaining. His identification of the ancient Halicarnassus on the mainland of Asia Minor precedes by about a hundred years its official discovery by Sir Charles Newton in the 1850's.

An interesting chapter is devoted to Charlemont's stay in Rome and to the intriguing ramifications of his famous dispute with Piranesi. It was in Rome that he made friends with Sir William Chambers, with Joseph Wilton, the sculptor, with Giambattista Cipriani, and with Simon Vierpyl, all of whom were subsequently concerned with the works at Marino.

On his return from his foreign travels, Charlemont began to put his building projects into effect. First came the house at Donny-carny given him by his stepfather. This he renamed Marino, and enlarged by degrees to designs by Chambers.

Then he began to build in earnest. Next came Charlemont House in Dublin which was completed by 1776 to designs by Chambers. Its shell may still be seen, adapted in 1930 to make an admirable modern picture gallery in which Dubliners hope the Lane pictures may some day hang.

The Casino was finished later, and Mr. Craig puts it on a level with Wren's Orangery or Gabriel's Trionfo. This exquisite and remarkable building, designed by Chambers, is a miniature country house ingeniously fitted into a most elegant monument in the Roman style. Its very chimneys take the form of a pair of urns. It was fortunately preserved in the nick of time by the Irish Ancient Monuments Act

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of 1930, and skilfully restored under the direction of Mr. H. G. Leask. Mr. Craig's descriptions are helped by a few well-chosen photographs.

On the death of Rockingham, to whose friendship as Prime Minister in London he considered that his party owed so much, Charlemont commissioned Gandon to design as a memorial the Rockingham Library for his Dublin house. In it was enshrined Rockingham's head by Nollekens. The relative correspondence with Lady Rockingham and the grandiloquent inscription which supported the marble are not without interest, nor ought the account of Charlemont's founding of the Royal Irish Academy, nor of his membership of Doctor Johnson's Literary Club to escape mention.

Mr. Craig is able with a few skilfully chosen touches to give us some idea of Charlemont's family life which centred on Marino, as well as of his public life which centred on Charlemont House. Through his career we are able to watch the flowering and withering of a remarkable period of Irish history; but, behind the 'Martial Equestrian Lineaments' of the Volunteer Earl, we come to know a character of dignity and gentleness, of taste and of talent.

Mr. Craig is to be congratulated on his first work of biography. His sensitive, unpretentious presentation of a life of great interest and variety makes a work, both entertaining and stimulating, which should not be missed.

Bryan Guinness

SUBLIME INFLUENCE

JOHN MARTIN 1789-1854: HIS LIFE AND WORKS.
By Thomas Balston. London: Duckworth, 1947.

THE considerable twentieth century literature on Martin, of which Mr. Balston's book represents the most elaborate example, has not settled the question of his quality and his rank as a painter. This book may, however, be recommended, not so much as a treatise on a painter whose relatively minor rank remains still to be effectively revised, but as a more general document on Romanticism with presumptive relevance to an important cycle of architectural development. The material is carefully marshalled, and although the illustrations are necessarily small, the Romantic-Classical character of Martin's dream architecture becomes sufficiently evident.

Current interest in the chief architects of the late eighteenth and early nineteenth centuries is now little focused upon their debatable 'classicism.' On the contrary, from Ledoux and his contemporaries through Soane and Schinkel, the measure of their 'romanticism' is no longer considered to be their incidental use of elements of mediaeval origin but the directness with which they aimed to stimulate various emotional reactions. Donald Pilcher, in writing on the architecture of the Regency in England, has rightly stressed the dependence of minor architectural practice on the theories of the Picturesque; among major architects and in monumental work the accent was rather on the actualization of the theories of the Sublime. Such an ambition, moreover, continued to motivate certain architects well beyond the mid-century.

This very careful and complete compilation of the facts about Martin's career, illustrated with more than a score of his principal compositions, should have an interest to readers of the REVIEW not dependent upon his intrinsic quality as a painter nor yet on the somewhat pedestrian character of the text. Look at the right half of the 'Joshua,' with the exhibition of which at the Royal Academy in 1816 Martin's fame properly began, and you will see a more Sublime architectural complex than any architect of the age dared project; nor is it more remote in its archaeological exoticism (based on

the most tenuous hints as to the real architecture of the ancient East) from the inherited standards of polite eighteenth century architecture than much of Soane's or Schinkel's finest contemporary work. Three years later 'The Fall of Babylon' is even more completely a painting of dream architecture, perhaps a trace more plausible in some of its features, such as the stepped ziggurat of the Tower, but presaging more definitely the endless colonnades of Martin's Embankment Scheme of the thirties. (Mr. Balston's interesting material on Martin's engineering schemes has already been presented in the REVIEW.)

The next year his 'Belshazzar's Feast' may remind us by its lighting of an earlier painting of the same subject by the little known seventeenth century master Desiderio Monsù lately published in these pages, but the architecture of the palace where the feast takes place could hardly be more different. The gigantic size of the structural elements, the rather perverse fashion in which they at once suggest the regularities of Greek colonnades while avoiding characteristic Greek details, look forward to some of the characteristics of the early twentieth century *Jugendstil*. We are also reminded of that bluntness, that admiration for the forceful and the reiterative, which came into architecture as a new ideal more than a generation earlier with the acceptance of the 'rude' Greek Doric.

Klingender in *Art and the Industrial Revolution* has suggested that the early engineers looked upon this 'Babylonian' style of Martin and found it good. Certainly Francis Thompson's design of the masonry piers and entrances of Stephenson's Britannia Tubular Bridge in the mid-forties is closer to this than to anything really Egyptian; indeed Thomas's superb lions that guard its portals seem to belong in such a setting as Martin's Babylon.

More specifically Martin's architecture suggests, however, a probable source for the strange personal style of the last great exponent of Romantic Classicism in architecture, 'Greek' Thomson, particularly in the ranges of stubby and swollen columns set high on the building masses, and more generally in the amalgamation of Egyptian and hypothetically Babylonian or Assyrian motifs on a base that is obviously Greek. Thomson's career really began in the fifties only just as Martin's was ending; and by that time archaeological publications were available to provide him with more precise detail on the actual forms of the early architectures of the Middle East. But where else than in these Babylonian pictures—then widely known through Martin's own mezzotints and other prints based on his paintings—is the particular quality of Thomson's style so closely suggested, even though as a practical architect he never attempted anything like the gigantic scale of Martin's fantasies? Klingender, who has rather more interesting remarks to make in passing about these aspects of Martin than those who have devoted complete articles to him, calls attention to the influence of the early illustrators of the new industries on some of Martin's Miltonic compositions, noting also the modernism of the gas lustres which illuminate Satan's 'Infernal Council.' But his Hell, if we look backward, also recalls the formalized Heaven of Ledoux's spherical columbarium, while externally the infernal city of Pandemonium, if less Ledolcian, is as Thomson-like as his Babylon and Nineveh.

Such tentative suggestions of Martin's influence on contemporary British engineers and architects require careful checking lest they be exaggerated. On the other hand, Martin's fame was international, as was the market for his compositions in print form, so that his architectural influence may well prove to have extended outside Britain. Certainly his influence on the leading American Romantic

painters, Allston and Cole, is undeniable. It may well be that in America and even in Europe traces of his influence on the architecture of the second quarter of the nineteenth century will be found. The attribution of the Ohio State Capitol in Columbus is confused by many claims: certainly, however, Cole played some part in the design. Although its columns are Greek Doric, its scale, its simplicity, its reiterative power all suggest the abodes of Belshazzar, if not of Satan, as Martin imagined them. That element of exoticism, sometimes much too precisely referred to as an 'Egyptian Revival,' that gives both grandeur and original flavour to much of the public architecture of the thirties and forties in America, as the inspiration of Stuart and Revett began to wear thin and before the new Victorian currents were much accepted, may well be found to derive from Martin.

H. R. Hitchcock

ONE OF OUR CONQUERORS

ELIEL SAARINEN. By Albert Christ-Janer. The University of Chicago Press. \$15.00.

THIS biography of Eliel Saarinen is the story of a great architect; and to some extent the story of an epoch. It is simply, but meticulously, told. Albert Christ-Janer has presented his subject by exposition, without critical analysis. While he has been at pains to bring out the salient qualities of Saarinen's work, and its importance, the architect reader is left to form his own judgment, helped by numerous and adequate illustrations.

Whatever the assessment may be, Eliel Saarinen has staked a claim to a place in architectural history. His claim is not entirely a personal one. The glamour and romance of his emergence from the then indistinct Finnish background help to build it up. Saarinen introduced Finland to the outside world of architecture. He performed this introduction in a bold brave way. His great station at Helsingfors remains as an architectural offering to the modern world. Other national architects have confirmed the Finnish contribution. But Saarinen has been to Finnish architecture what Richard Wagner was to the German music drama. He has something of the same grandeur; some of the same weaknesses. Eliel Saarinen, in common with his seniors H. P. Berlage, Van de Velde, Otto Wagner, Louis Sullivan, C. R. Mackintosh, was temperamentally in revolt against eclecticism; against the Beaux-Arts influence, against the spirit of World's Fairs as seen in Chicago 1893, and Paris 1900. Yet his work, like that of many of the revolutionaries, could scarcely have existed in its mastery of form and order without the background of academic traditions. His external expression rejected the old current trappings, but it is fair to say that the massing of many of his early buildings and projects is not without 'Grand Prix' affinities.

The biography is in two parts. First, the work in Finland, secondly, the career in America arising from his second-prize design for the Chicago Tribune Tower. In this latter period there is a marked development from the Jugend-Stil influence to a form of clean contemporary design typified in the Cranbrook Institute of Science. Later, one senses the effects of architectural partnership, first with Swanson and Eero Saarinen and finally with Eero (his son) alone. Evidence of intensive study, sensitivity and bold technique mark this creative work, much of which reaches high levels in such buildings as the Kleinhaus Music Hall at Buffalo and the Tabernacle Church of Christ (Columbus, Indiana).

A chronology, a bibliography and a foreword by Alvar Aalto are valuable sections of

this book, which also covers some of Saarinen's contributions as a town planner and reveals his superb skill as a draughtsman. There are a few minor slips; but the author earns our gratitude for producing a timely work which can inspire contemporary architects in every country.

Howard Robertson

GOLD-RUSH COUNTRY

CALIFORNIA PICTORIAL. By Jeanne Van Nostrand and Edith Coulter. Published by University of California Press, 1948.

TWO ladies, one a librarian, the other a professor in the school of Librarianship at the University of California, have collaborated to produce a book of paintings and drawings which illustrate the development of California from 1786 to 1859.

The first part of the book illustrates California before the Gold Rush, under the flags of Spain, then Mexico, and finally the U.S.A.

It is intended to be a supplement to non-illustrated histories of the State, so that the note accompanying the illustration may describe the artist and the scene without attempting to record the broad historical patterns. Indeed, without a certain prior knowledge of California history, the book would lose much of its meaning. But this is often the disadvantage of a 'Pictorial,' and within this limitation the authors present us with some delightful and hitherto unpublished material.

Among the drawings of the early settlements is an excellent one of Fort Ross which was established by the Russians. This fort, so strangely medieval when one reflects that it was being built simultaneously with Nash's Corinthian colonnades at Carlton House Terrace, was built to resist a possible attack from the Mexicans, or from the bows and arrows of the Indians. The reviewer has seen this fort and it looks today very much as it is depicted, with its stockade, houses and chapel of split logs, look-out towers and cannon.

On Plate 15 we are shown the town of Sonoma where, in 1846, the commanding general of the Mexican forces was imprisoned, and an astounding ceremony took place in which the 'Bear flag,' said to have been made from the petticoat of a local citizen, was raised in place of the Mexican flag, and the short-lived independent Republic of California was proclaimed.

It was also in 1846 that a solemn agreement was signed between General Mariano Vallejo and Mr. Andrew Hoepfner, and I quote the first paragraph because it expresses the yearning for a civilized life in the midst of a rough and precarious environment.

'Mr. Hoepfner obligates himself solemnly to teach Mr. Vallejo and his actual family to play the pianoforte, with all the science of the art, giving lessons of music at least during five years, or more if it should be necessary, until the complete instruction of the children, both male and female.'

There were probably not more than two pianos on the western coast of the American continent at the time of this agreement and in return for his services Mr. Hoepfner received a land-grant of one thousand extremely fertile acres near the town of Sonoma.

It would be pleasant to record, for readers of the REVIEW, some interesting building techniques to be found in these early settlements, but in fact there is little here of structural or architectural originality, other than an absolutely direct and unselfconscious solution of the immediate problems.

A large part of the illustrations was done by soldiers and sailors, and later, by prospectors,

simply with the idea of making an accurate record of the landscape, the houses and the planning of the early settlements.

However, in the second part of the book, which illustrates the Gold-Rush years (1849-1859), we see the work of a few professional painters of consequence.

Charles Christian Nahl is one of the very few 'Forty-niners' who became famous and prosperous from his work. He soon gave up prospecting for gold and made his living from photography (in which he was a pioneer), and from his large canvases depicting life at the gold mines and journeys across the plains. He was a German by birth but his work shows signs of his years of study in Paris, for in a crude fashion his pictures at Stanford University are reminiscent of the School of Ingres with which he was obviously familiar.

Albertis del Orient Browere was an admirer of the Hudson River school and neighbour at Catskill, New York, of Thomas Cole about whose work Christopher Tunnard wrote an article in a recent number of the REVIEW. Browere sailed round the Horn in 1852 and reached California after four months at sea. On this and subsequent visits he painted a series of pictures showing the struggles of men in search of gold, and the isolation of their lives, far from the steam trains and urban marvels of New York. Either consciously or not, in almost every face which is clearly depicted, there is a look of avarice.

This is the region which has become today one of the greatest agricultural and industrial centres of the world.

David Pleydell Bouverie

REFRESHER COURSE

BUILDING SCIENCE. George Allen & Unwin Ltd. 1948. 21s.

DURING the latter years of the war the Architectural Science Board of the Royal Institute of British Architects realized the need for some quick method of keeping architects abreast of the many technical developments which had been taking place in building. The best answer appeared to be a series of lectures which would be given as something in the nature of a quick refresher course. For each lecture an attempt was made to obtain the services of an outstanding expert. The results were so successful that the A.S.B. lectures now appear to be a regular feature on the R.I.B.A. annual programme.

The present volume is a collection of the most important and useful of the early lectures but it is not a mere reproduction of the papers as they were read. Under the general editorship of D. Dex Harrison the original lectures have been carefully reconsidered with a view to eliminating overlapping material, and, where necessary, they have been brought up to date by their authors. The result is not claimed to be complete, in the way that a normal textbook might be, but it does provide a most valuable fund of reliable information over a wide range of the scientific side of architecture. Both the Architectural Science Board and the editor of the book are obviously aware of the fact that good science does not necessarily result in good architecture and the first paper in the series, by M. Hartland Thomas with its title of 'Architecture—A Bridge between Art and Science,' provides an interesting introduction to the rest of the book by dealing with this point.

The remaining thirteen papers range over subjects as far apart as 'The Technique of Social Survey,' 'External Rendered Finishes' and 'Building Plant.' Altogether the collection forms a most useful reference and at the same

time presents an interesting picture of the place of science in building to-day.

C. C. Handisyde

SHORTER NOTICES

TONY GARNIER. By Giulia Veronesi. Collection Architetti del Movimento Moderno, published by Il Balcone, Milan, 1948.

Italian publishing on architecture has grown very bold since the end of the war. This series is proof, small books, it is true, but special books on Morris, Wright, now Garnier, and soon Aalto, Asplund, Olbrich and Perret. Each has an introduction of some 5,000 words and about 40 illustrations. British technical libraries will have to watch for them; for some, such as the present one on Garnier, contain information not otherwise easily obtainable, and to see the *œuvre* of a man collected and presented chronologically is in any case revealing, if one is used to seeing only a few of his principal works illustrated and discussed in other connections. Signora Veronesi's book has 19 pictures of the Cité Industrielle and 17 of the public works of the City of Lyons.

N.P.

WHITE HORSES AND OTHER HILL FIGURES. By Morris Marples. Country Life. 21s.

Of all the experiences of childhood, the first sight of a White Horse was the most utterly surprising. 'In a minute we shall see the White Horse,' one's father had said, and the remark seemed charged with a mysterious significance. One peered forward through the windscreen at the nearer fields, and then, suddenly, one saw it, shining out with an almost incredible clarity from the distant downs. One knew it at once for what it was, of course—a chalk horse cut in the hill-side; yet the expectation of a creature of flesh and blood became entangled with the perception of the so much more wonderful reality, so that one was never quite able to rid oneself of the notion that the White Horse was, somehow, alive.

This atavistic half-belief in the life of hill figures surely lies at the bottom of the fascination they have for us in later life. But hitherto it has been difficult to get a stage further—to find out what is known and what has been guessed (a great deal more!) about their origins and purpose. Mr. Marples' book, dealing with every known English hill figure, ranging in age from the Uffington Horse to the New Pewsey Horse and in type from the Whiteleaf Cross to the Cerne Giant, could hardly fail to be useful. But in fact it is much more: there is not a page of it which could not be read with pleasure by anyone who had never set eyes on a white horse or other hill figure in his life. This is partly because of the intrinsic interest of much of the information that it contains, partly because of the sheer entertainment value of many of the older antiquaries' theories (which Mr. Marples summarizes in each case), but most of all because of the skill with which Mr. Marples marshals his facts and the lucidity with which he writes.

M.W.

AMSTERDAMS BOUWKUERST EN STADTSCHOON, 1306—1942. By J. G. Wattjes and F. A. Warners. Allart de Lange, Amsterdam, 1948.

The pattern of Amsterdam is one of the most interesting amongst European cities. Its importance is not as a rule enough emphasized in books on town planning. On top of that, it is specially interesting for us, because certain streets in Amsterdam can give one a good idea of what London might have been, if there had been no fire in 1666, and if this had not been followed by the immense prosperity of the eighteenth century. At Amsterdam the high-water mark was the second half of the seventeenth century, and nearly all that was built then still exists. The eighteenth century additions are in the same area, on the same scale and pretty well in the same style. So there is an unsurpassed wealth of attractive town houses. This book is a remarkable record of that. It consists of a few rather poor maps, 16 pages of architectural history and then peregrinations amongst the old and the new buildings of the town. The amazing thing is that there are no less than 858 illustrations. It is a dazzling thought that a book of this kind might be produced on London. But which publishers would dare do it?

N.P.





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ANTHOLOGY

Poetry and Truth from My Life

The God, who stands in immediate connection with Nature, and crowns and loves it as His work, appeared to him the actual God, who could enter into a closer relationship with men as well as with all else, and would take care of him even as of the movements of the stars, the days and seasons, plants and animals. Some passages of the Gospel stated this explicitly. To this Being the boy could ascribe no form; he therefore sought Him in His works and wished to erect an altar to Him in the good Old Testament way. Products of Nature were to represent the world symbolically, and above them a flame should burn and signify the spirit of man yearning for its Creator. Now from the collection of natural objects which the boy possessed, and which had been increased as chance directed, he brought out the best ones and specimens, but how to arrange and build them up was now the difficulty. His father had a beautiful red lacquered music stool adorned with gilt flowers, in the form of a four-sided pyramid with different elevations, which one found very convenient for quartets, though latterly it had been very little used. The boy got possession of this, and now built up his representatives of Nature in steps, so that it had a thoroughly cheerful, and at the same time significant, appearance. Now the first adoration of God was to be celebrated at an early sunrise, only the young priest was not quite decided in what way he should produce a flame, which at the same time should emit a pleasant fragrance. At last an idea occurred to him which enabled him to combine both, as he possessed fumigating pastilles which, though they did not flame, yet, while glowing, gave out the most delightful smell. Indeed, this gentle burning and smoking seemed to express still better than an open flame that which passes in the heart. The sun had already long risen, but neighbouring houses veiled the East. At last it appeared over the roofs; at once a burning-glass was taken in hand, and smoking tapers, standing as a special adornment of the room which had been given up to the boy in the new house. Everyone regarded it only as a well-arranged collection of natural curiosities. The boy however knew better, but kept quiet. He yearned for a repetition of this solemnity. Unfortunately, just as the sun arose most opportunely the china cup was not at hand, so he put the fumigating pastilles direct upon the upper surface of the music stool; they were lighted, and so great was the devotion of the priest that he did not observe what damage his sacrifice caused until there was nothing more to be done. The tapers had burnt themselves into the red lacquer and into the beautiful golden flowers in a horrible manner, and, as though some evil spirit had vanished, their black inextinguishable footmarks were left behind. On this account the young priest was greatly embarrassed. No doubt he knew how to conceal the damage with the largest pieces of his show materials, but the spirit for a new sacrifice left him, and this accident was almost regarded as an intimation and warning of how dangerous it is to attempt to approach the Deity in such ways.

GOETHE (*Autobiography*), Alston Rivers Ltd., 1832.
(Translated by R. O. Moon, M.D., F.R.C.P.)

MARGINALIA

This Month's Anthology

'Standing by the altar, and looking back along the axis of the horseshoes to the Hole Stone, at the head of the avenue, one is facing the point where the sun will rise on midsummer day.' Thus Professor Hawkes in his recent *Prehistoric Britain*. The connection of Stonehenge with the worship of sun and light is an accepted, if not strictly provable, hypothesis. One incidental proof or corroboration has been

provided to the Editors of THE ARCHITECTURAL REVIEW by Dr. Adama von Scheltema, the distinguished Continental expert on prehistoric art. As his letter happens to link up Stonehenge, discussed in this number by Mr. Piper, with Goethe, the bicentenary of whose birth is being celebrated all over England this year, we hasten to print the above anthology together with Dr. Adama von Scheltema's comment:

'On the strength of innumerable observations it is possible to show that the mental develop-

ment of children corresponds to the early development of mankind. This principle, which I would like to call psychogenetic recapitulation, in contrast to the similar principle dealing not with mental, but with physical development, has not been seriously explored. One of the reasons for this omission is that the parallel to the state of mind of our children can never be found in the highly developed Oriental, Greek or Roman civilizations, but only in our own prehistoric age, the childhood of European man. Since our psychologists are as little acquainted with archaeology as our archaeologists are with the psychology of childhood, no comparative research has been undertaken. On the other hand, the thought that each of us recapitulates in his early youth the primitive state of mankind, was quite familiar to many philosophers and poets, psychologists and schoolmen of the beginning of the nineteenth century, and Goethe himself has drawn attention to it in his conversation with Eckermann on January 17th, 1827. This is what he said: "Even if the world as a whole must progress, youth must always start again from the beginning, and the individual must go through the epochs of the world's civilizations." But he did not realize, as we do, that his own Stonehenge game bears out this theory of his.

INTELLIGENCE

The number of permanent houses completed in Great Britain during June this year was 16,489, a decrease of 377 from the figure for the month of May.

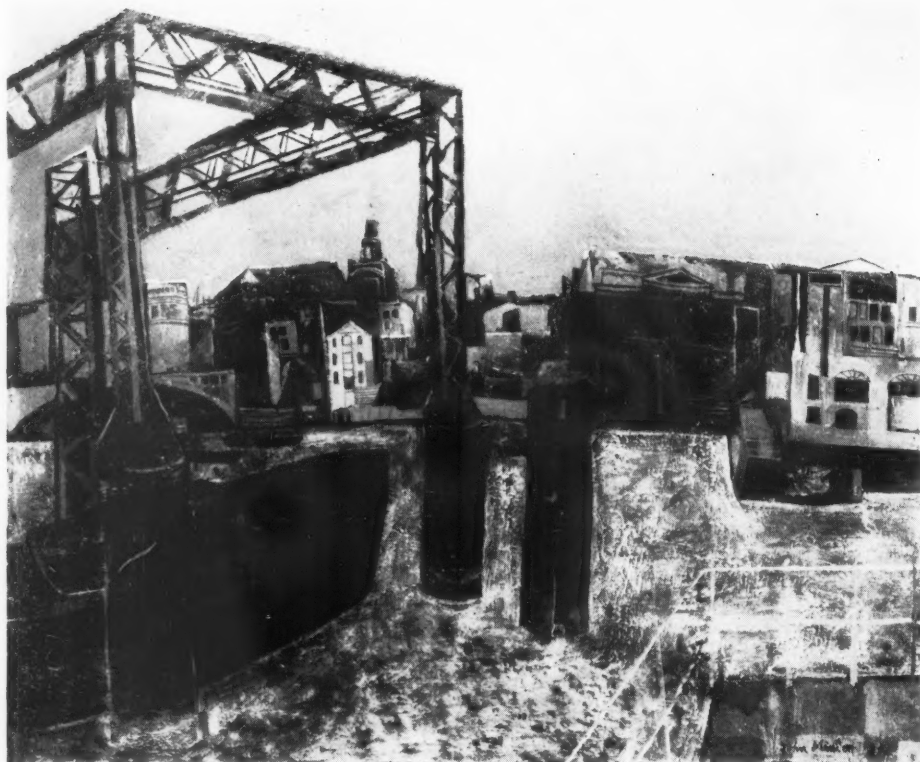
A final total of 935,000 claims for loss of development values is announced by the Central Land Board.

Further figures of progress in the new towns have become available. At Stevenage 20 aluminium houses are being erected. In Hemel Hempstead 233 houses are nearing completion; the construction of a further 179 is being negotiated; a labour camp for 300 men is being built; more than 100 tradesmen and private residents have received notice that their premises may be purchased compulsorily in the future. At Harlow 102 houses are nearly finished, and some of these are now occupied. At Aycliffe a number of houses are completed and occupied out of the total of 306 that has been approved. Crawley has 34 houses, some of which are in use; a labour camp has been completed; trunk sewerage and a section of the sewage works are also finished.

Exhibitions

Recent exhibitions seem generally to have been what is called mixed. Part One of 'Artists of Fame and Promise' at the Leicester Galleries was the most mixed of all. Among the variegated blossoms which decked this hardy perennial in its first flowering this year there were not many that had directly to do with architecture. A John Piper, of Byland Abbey, was one of the few. (It was the only Piper in the show, though not the only picture with a Piperian sky.) Of the drawings, Ardizzone's studies of girl cyclists, observed with an affectionate irony, were among the most enjoyable. On the whole, this was an exhibition with few surprises, and it was perhaps a little disconcerting to see with what sureness Augustus John's not unknown head of a Spanish gypsy dominated the room in which it hung. (August 10.)

Less mixed—and the better for it—was the recent exhibition at the Lefevre Gallery, called alternatively 'Contemporary British Painters' (which was not correct) or 'Contemporary British Paintings: Sickert to Hodgkins' (which was self-contradictory). Gilman, Minton, Ben Nicholson and Keith Vaughan were among the painters best represented, and there were two



1, *THE CITY FROM BANKSIDE*, by John Minton, at the Lefevre Gallery.

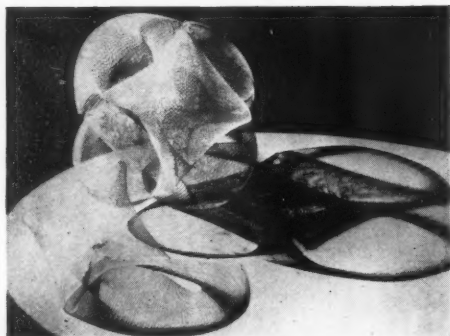
brand-new Sutherlands (not of Mr. Somerset Maugham). One of the Minton's is reproduced on this page. (August 27.)

Least mixed of all, in a slightly different sense, was the exhibition of contemporary German painting at the St. George's Gallery in Grosvenor Street. 'Contemporary German Ex-

pressionist Painting' it might almost have been called; but then only one of the artists was under forty, and the pictures that made one pause were apt to turn out to be by one or the other of those two veterans of that movement, Cesar Klein and Emil Nolde. Nevertheless, this was a welcome exhibition.



2, a general view of the Chicago Institute of Design Exhibition, held by the Council of Industrial Design during July. 3, construction in wire mesh a design from the exhibition.



Design from Chicago

An interesting exhibition of the work of the Chicago Institute of Design was held in London during July under the auspices of the Council of Industrial Design. Moholy Nagy's school of a few enthusiasts which started as 'the new bauhaus' at Chicago in 1937 has now an enrol-

ment of 400 full-time and about 300 evening class students. Since Moholy's death in 1946 the school has been under the directorship of Serge Chermayeff.

The exhibition, which was prepared in 1947, showed the course much as Moholy Nagy conceived it. Some changes had been made since then, mainly owing to the different nature of the student body—now about 80 per cent ex-forces. A more complete architecture course has been built up and the experimental educational work in this department is shortly to be documented.

The principles of education followed by the I.D. are not entirely new to an English audience which has had access to Moholy Nagy's *Vision in Motion*, Gregory Kepes' *Language of Vision* and the original Bauhaus publication. All these have had their influence on education for design in this country. Something even in the nature of a new orthodoxy has come into existence which employs methods similar to those of the Bauhaus and the I.D.—not always, though, with sufficient understanding of the principles involved. The I.D.'s own chief educational tool is the basic course of three semesters in which the principles of an approach to design are established. Specialization to some degree takes place as the designer graduates into one of the four main workshops in architecture, product design, visual design or photography. The specialized workshops combine at all levels on communal projects. On entering the school the young designer is immediately engaged in creative experiment. In order that he should not be limited to his still immature conceptions, his work at this stage is purely exploratory. Exploration of line, colour, form, of space, of physical and visual properties of material through manipulation with various tools, of light, leads in the second phase to the performance of assigned tasks, giving a mastery of technique and increasing awareness of its practical and visual effects. In the third phase of the basic course, technique and vision are applied to use in the four main areas of the specialized workshops, in one of which the designer will do his future work.

The American scene with its profusion of materials, techniques and design talent throws into relief, even more sharply than the British, the need for concentration on the essentials of design. Eclecticism and technical ingenuity divorced from human needs seem to be the main pit-falls. In steering clear of both and yet preserving imaginativeness and integrity intact, the Institute of Design has a vital contribution to make to the evolution of design in our day.

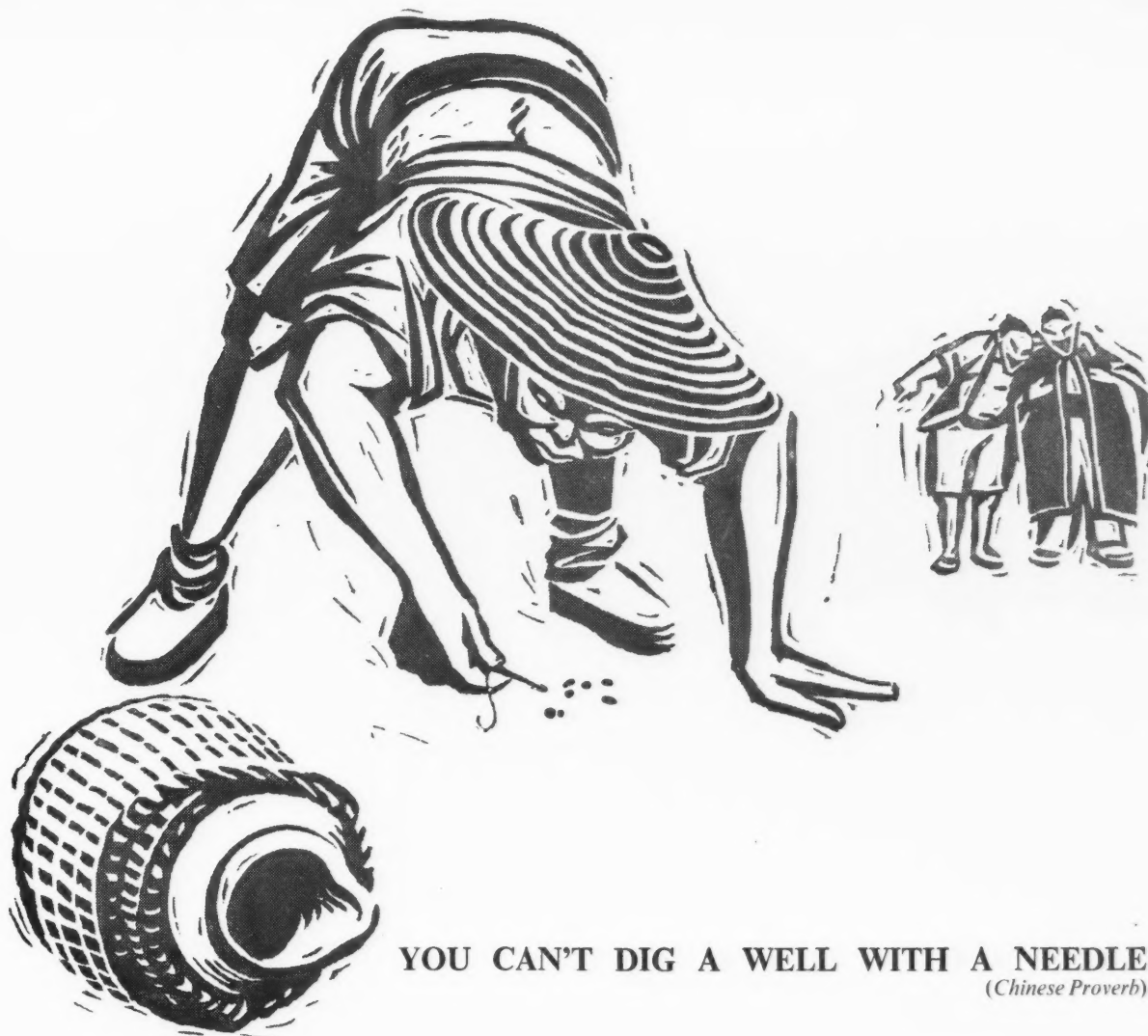
Penguins Galore

Future historians of taste will surely give King Penguin Books a high place among the things that have contributed towards the visual re-education of the British public in the decade which is now running out. With *Popular Art in the United States*, by Erwin O. Christensen, the number of King Penguins published (or hatched?) to date has reached the half-century. The REVIEW congratulates Penguin Books on a fine feat of incubation, and is happy to remember that it counts one of the chief sitters among its own Editors.

Unesco Clearing House for Periodical Reproduction

The Libraries Division of Unesco has been instructed by the General Conference to devise a means for the reproduction of out-of-print periodicals. A small number of periodicals was selected and enquiries made of the publishers whether they were out-of-print. In the process

[continued on page 200]



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(Chinese Proverb)

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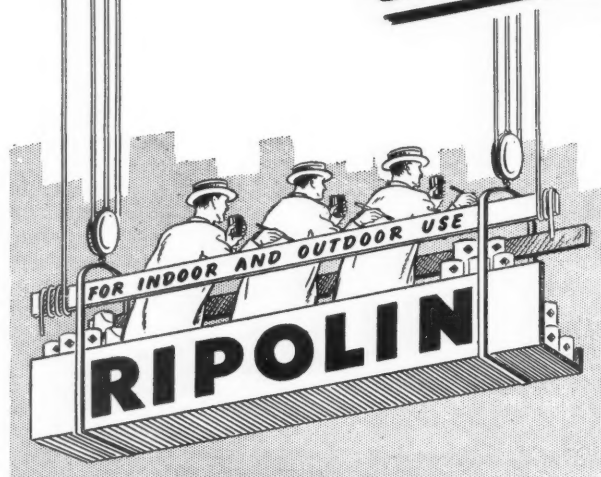
WHOSE FAULT? The grounds surrounding Waynflete's Tower at Esher, where (as Lindus Forge reminds us on page 186) Horace Walpole found William Kent Kentissime, are now a housing estate. Yet before one blames the bathos of the scene above entirely on the barbarism of the twentieth century, one should, perhaps, pause to reflect. Was not Kent the first of the Romantic Eclectics? And was he not, as such, the great-great-great-grandfather of the 'half-timbering' of the villa on the right?

continued from page 198]

of making enquiries, contact was made with publishing groups and individuals in France, the United Kingdom, United States, Middle East, Canada and Germany, who are already engaged in the reproduction of out-of-print periodicals. In order to further the work being carried on in different countries, a Unesco Clearing House for Periodical Reproduction has been established. Reports and enquiries received about out-of-print periodicals are centralized in the Clearing House and an attempt will be made to publish, from time to time, reports on the progress of work being done in periodical reproduction. Particularly important in this respect is the development of union catalogues, in various countries, of long runs of periodicals on microfilm. For the present time, attention will be directed to the following periodicals: *Nature*, *THE ARCHITECTURAL REVIEW*, *The Economist*, *Revue Générale des Sciences Pures et Appliquées*, *Journal of Experimental Medicine*, *Journal of Biological Chemistry*, *Review of Economic Statistics*. All are in demand from libraries throughout the world and all have issues from 1939 to 1945, and some preceding years, out-of-print. Suitable reproduction methods will be employed to give the required number of reproductions to meet the demand for subscription. Libraries or individuals wishing to secure out-of-print issues of these publications should write direct to the Unesco Clearing House for Periodical Reproduction, stating exactly the issues needed. It will be necessary to have at least 100 subscriptions before any individual issue can be reproduced by photo-lithograph. The price of each issue will be the same as that originally set by the publisher. Issues out-of-print prior to 1939 will be considered for microfilming rather than for photo-lithography. The price of microfilm will be approximately $\frac{1}{2}$ c. (U.S.) or 1.50 French francs a page.

[continued on page 202

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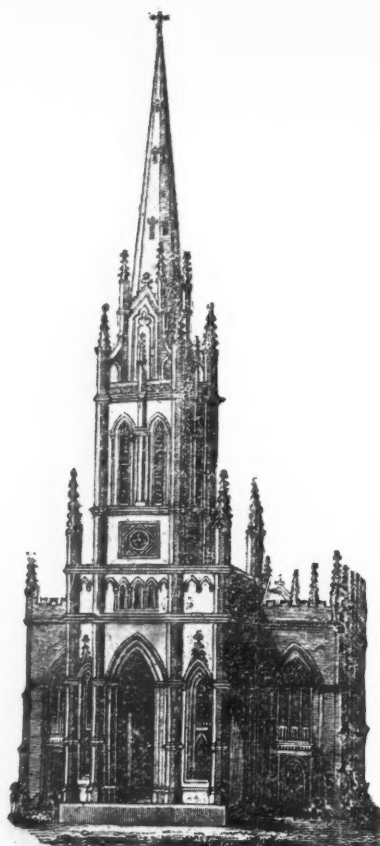
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A Barry Demolition

The church of St. Matthew, Campfield, Manchester, the first public building completed by Sir Charles Barry, is to be demolished.

A Commissioners' church, built in 1822-24, St. Matthew's has been shut for some years, and its interior can be known to few REVIEW readers. Set in a waste of slumdom, the building is not indeed too easy to find. But its steeple is a conspicuous object from the railway embankment outside Central Station, and must have caught the eye of many travellers as almost the only object of character in the landscape. The steeple is, in fact, the only part of the church of any great value, and it was suggested (by the Manchester Society of Architects and the Georgian Group among others) that it, at any rate, should be preserved as a pictorial element in the area as replanned. The verdict has gone against it because the area in question is allotted to tall office buildings which would, it is said, by their height detract from its effect as such. But what about St. Clement Danes and St. Paul's, New York City?

The engraving of St. Matthew's, Campfield, at the head of this note, from a newspaper contemporary with the building of the church, was found among correspondence at Sir John Soane's Museum, by the courtesy of whose Curator it is here reproduced. Barry's first employment in the Manchester district was due to Soane's recommendation; so probably it was he who sent Soane the cutting. The caption to the original remarks: 'The spire above the clock is in a style of light and airy elegance, to which our engraving does not do justice.'

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struction Ltd. Railings: Hill & Smith Ltd. Painting: Craven Park Decorating. Glazing: Aygee Ltd. Reinforced concrete floors and stairs, terrazzo: Die-speker & Co. Facing bricks: Finnis, Ruault & Nicholls, Ltd. Metal windows: Williams & Williams Ltd. Grates: W. N. Froy & Sons. Grates for flatted houses: Grangemouth Iron Co. Steelwork: Matt. R. Shaw & Co. Sanitary fittings: Dent & Helyer Ltd. Ironmongery, picture rail: Parker, Winder & Achurch Ltd. Glass domes: Pilkington Bros. Kitchen fittings: Austins of East Ham. Doors, windows to laundry: Boulton & Paul Ltd. Entrance doors to flats: Manor Joinery Works Ltd. Curtain tracks: Hunter & Hyland Ltd. Wiremesh porches to Old People's Homes: H. H. Martyn & Co. Copings to boundary wall: Sussex & Dorking Brick Co.

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